

# **S**HELLS

HIGH EXPLOSIVE  
IN THE MAKING









# HIGH EXPLOSIVE SHELLS IN THE MAKING

A Souvenir Booklet

Issued by

The Maritime Manufacturing Corporation

Outlining Its Achievements

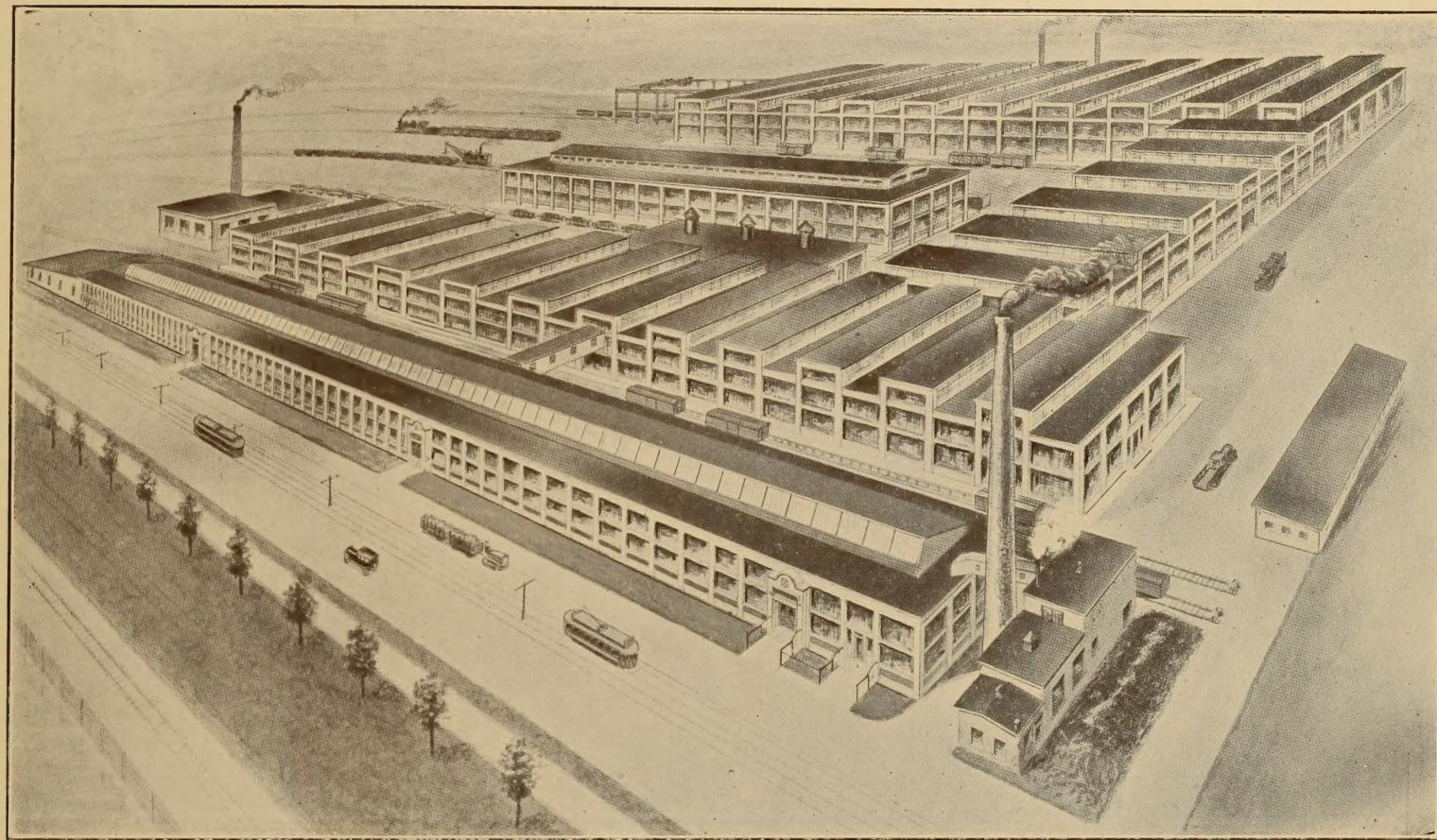
1918 - - - 1919



ST. JOHN, N. B.

CANADA



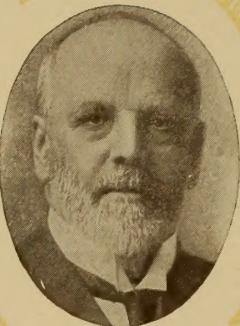


"Maritime" Plant at Rothesay Avenue, St. John, Canada

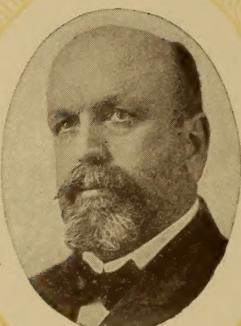
## Directors



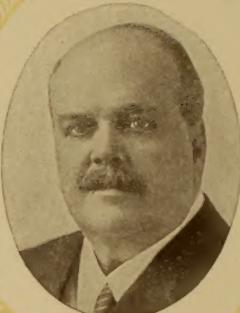
GEORGE McAVITY  
President



THOMAS McAVITY  
Director



JOHN A. McAVITY  
Vice-President



STEPHEN S. McAVITY  
Director



ALLAN G. McAVITY  
Managing Director



T. McAVITY STEWART  
Director and Washington Representative



JAMES L. McAVITY  
Director



G. CLIFFORD McAVITY  
Director



CHARLES COSTER  
Secretary and Treasurer

# Maritime Manufacturing Corporation

## Board of Directors

GEORGE McAVITY, *President*

JOHN A. McAVITY, *Vice-President*

ALLAN G. McAVITY, *Managing Director*

THOMAS McAVITY

STEPHEN S. McAVITY

JAS. L. McAVITY

G. CLIFFORD McAVITY

T. McAVITY STEWART

T. McAVITY STEWART,  
*Washington Representative*

CHARLES COSTER,  
*Secretary and Treasurer*

# INTRODUCTION

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**A**LTHOUGH the Maritime Manufacturing Corporation was only organized in the early months of 1918, it had, at the time the armistice was signed, attained an enviable position among munition manufacturers in America. At the time of the armistice it was operating the largest 9.2" shell machining plant in America. \*

¶ This plant covers ten acres and employed about 2,500 hands; the capacity of the plant had not been fully developed when the work was stopped, but it is safe to say that the output would have exceeded 2,500 finished 9.2" shells per day. \*

¶ This corporation realized the importance of maintaining the schedule of deliveries as laid down by the U. S. government, and no expense was spared in equipping the plant to attain this end. Orders were received on March 15 which called for deliveries beginning in September. The production department of the Bureau of Ordnance was particularly anxious to secure early delivery of this calibre shell, as cables had been received from General Pershing urging the earliest possible delivery. It is, therefore, particularly gratifying to record the fact that deliveries were started three months in advance of the promised schedule and that at the time of the armistice 25,000 more shells had been shipped than contracts specified. \*

¶ The United States government had purchased 9.2" guns from the British government, and shells of this calibre were put to immediate use on arrival in France and it was a great satisfaction to the corporation, and to all its employees to know that the shells which they produced were used by General Pershing's artillery in the World War. \*

¶ Early in the month of February, 1918, the United States government required immediately 240 milimetre proof shells to test out the guns which were then being made. To ensure prompt delivery this order was divided equally among four concerns. Although the Maritime Manufacturing Corporation had to install extra equipment and make new tools throughout, the shells manufactured at the Maritime plant were finished in June, this order being the first of the four to be completed. \* \* \* \* \*

¶ A separate plant employing about 350 hands was devoted to the manufacture of 4.7" shells. Owing to changes in design and delay in receipt of components, this plant did not have an opportunity to prove its capacity. It was equipped to produce 1,000 shells per day and at the time of the armistice deliveries had been made in excess of contract schedule.

¶ The success of the Maritime Manufacturing Corporation was due to the *esprit de corps* and enthusiasm of its employees. The home of practically every employee had been saddened by records of casualties with the forces overseas and the fighting spirit of those who remained behind was reflected in the output of shells from these plants. Every man and woman employed in shell production at the Maritime plants could be counted upon to work Sundays and holidays when required. \* \* \* \* \*





Showing over 200,000 Rough 9.2" Forgings (weight 370 lbs. each) in the 9.2" Shell Plant Yard, waiting to be Machined.  
The total length of above forgings in yard, if laid end to end, would make a solid steel line over one hundred miles in length

9.2" H.E.  
Shell



Showing  
Forgings  
leaving  
Car on  
Conveyor

## 9.2 Plant Officers and Staff

HUGH R. TAIT	.... <i>Supt. 9.2" Plant</i>
F. L. MILLER	.... <i>Purchasing Agent</i>
FRANK DUSTAN	.... <i>Chief Draughtsman</i>
GROVER KEITH	.... <i>Chief Engineer on Construction</i>
A. McCLOSKEY	.... <i>Chief Clerk</i>

### **No. 1 Shift**

7 A.M. to 3 P.M.

SMITH MOORE, *Asst. Supt.*    GEO. H. JOHNSTON, *Asst. Supt.*    H. G. EVANS, *Asst. Supt.*

<i>General Foreman No. 1 Shop</i> .....	WALTER WOODHEAD	JOHN L. ZANZINGER	H. TAYLOR
<i>General Foreman No. 2 Shop</i> .....	DUNCAN MCKAY		
<i>Foreman Shell Operations</i> .....	J. ALLISON	LESLIE BAIN	W.M. DODGE
<i>Foreman Shell Operations</i> .....	ROY WADDELL	G. S. PORTE	
<i>Foreman Base Plug Operations</i> .....	CHAS. LAUZON	W. E. CUMMINGS	J. A. MCKINNON
<i>Foreman Rectification of Components</i> .....	JOS. TOTTEN		
<i>Foreman Receiving and Shipping Crews</i> .....	H. TICKNER		
<i>Charge Hand Unloading Components</i> .....	F. SWEENEY		
<i>Charge Hand Face Nose, Drill and Cut Off</i> .....	FLETCHER McDONALD	L. PORTER	F. GALLAGHER
<i>Charge Hand Rough Turn</i> .....	JAS. SCOTT	ERNEST CAMPBELL	GEO. JACKSON
<i>Charge Hand Rough Turn</i> .....	E. FITZGERALD		W. BEDFORD
<i>Charge Hand Rough Bore</i> .....	WM. THOMPSON	G. ATKINSON	PERRY DUPLISSIE
<i>Charge Hand Finish Bore</i> .....	A. LAMB	A. BELVEA	C. STEWART
<i>Charge Hand Finish Turn</i> .....	A. P. BATES	S. R. FACEY	JOHN McFARLANE
<i>Charge Hand Wave Rib</i> .....	R. TOTTEN	R. WHEATON	J. WADDELL
<i>Charge Hand M.B.T., B.R.N., M.N.T.</i> .....	D. MURPHY	R. E. WADDELL	G. CONNELL
<i>Charge Hand R. &amp; F. T. Base Plugs</i> .....	J. McHUGH	PETER BLANCHARD	J. RILEY
<i>Charge Hand M. T. Base Plugs</i> .....	G. DUFFLEY		
<i>Charge Hand Base Plug Fitting</i> .....	F. CARTER		

## 9.2 Plant Officers and Staff—Continued

### D. W. ROBB, JR., *Chief Inspector*

	<b>No. 1 Shift</b>	<b>No. 2 Shift</b>	<b>No. 3 Shift</b>
<i>Head Inspector</i> .....	H. MCKEE	R. McDONALD	H. SHORTCLIFFE
<i>Assistant Head Inspector</i> .....	GEO. LAWLOR	H. FULTON	E. WILSON
<i>Heat Tracing and Shell Moving</i> .....	A. G. HILLSON	W. L. DAYE	F. SINCLAIR

### J. CRAWFORD SMITH, *Asst. Supt. Tools and Equipment*

	<b>No. 1 Shift</b>	<b>No. 2 Shift</b>
	7 A.M. to 6 P.M.	6 P.M. to 7 A.M.
<i>Foreman Tool Department</i> .....	WALTER POWERS	DANE CROSBY
<i>Foreman Machine Repairs</i> .....	DANIEL THOMPSON	WM. MCKAY
<i>Foreman Millwright</i> .....	HARRY SCOVIL	EDWARD ROBICHAUD
<i>Foreman Electrician</i> .....	WARREN VAUGHAN	WM. TRIFTS
<i>Chief Engineer Power Plants</i> .....	JOHN E. B. HERD	

### MISS BESSIE DAWSON, *Supervisor of Women Employees*

	<b>No. 1 Shift</b>	<b>No. 2 Shift</b>	<b>No. 3 Shift</b>
<i>Assistant Supervisor</i> .....	MISS A. M. MCKIM	MRS. J. MOSS	MISS J. SANDALL

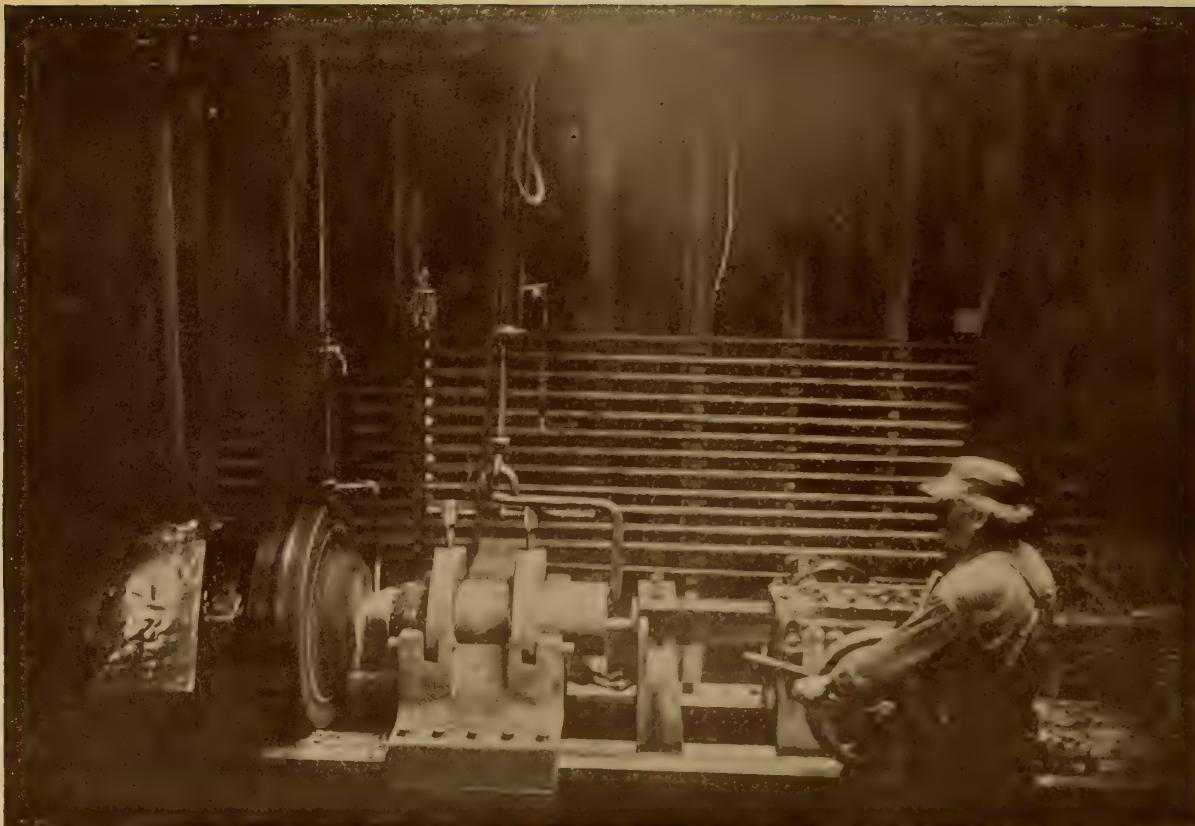
### STEEL FOUNDRY

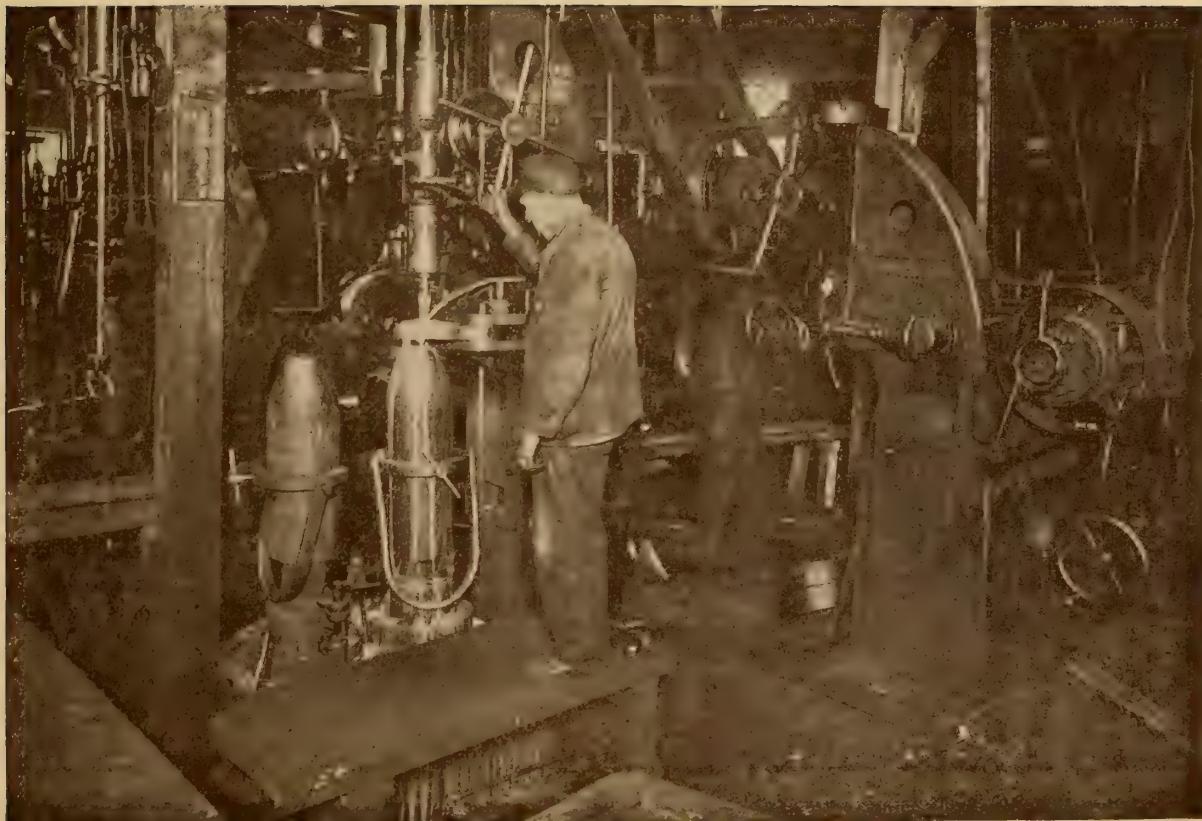
THOS. E. DAY, <i>Engineer</i>	RICHARD MORRIS, <i>Foreman</i>
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<i>Cafeteria</i> .....	MRS. A. L. PRICE	MISS ROSAMOND McAVITY	MISS GLADYS DOWLING
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9.2" H. E  
Shell

Operation  
No. 1  
Rough  
Face  
Nose

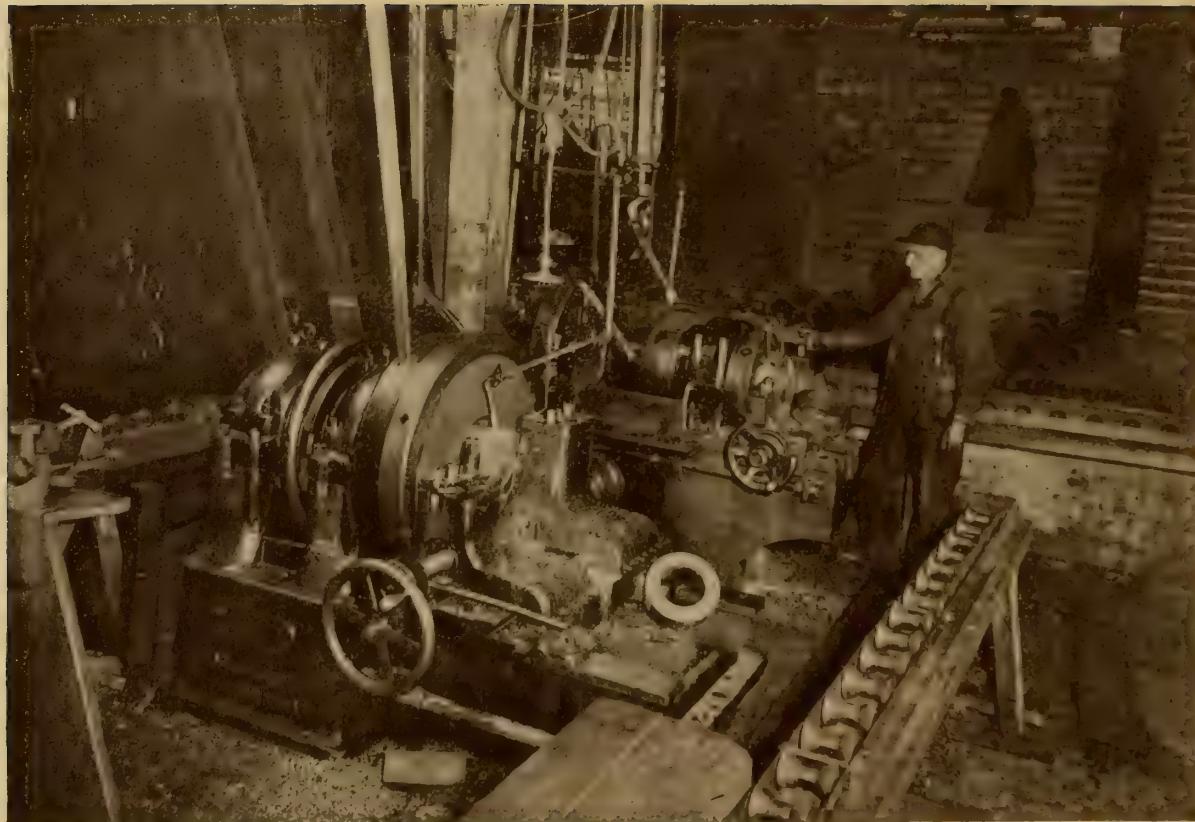




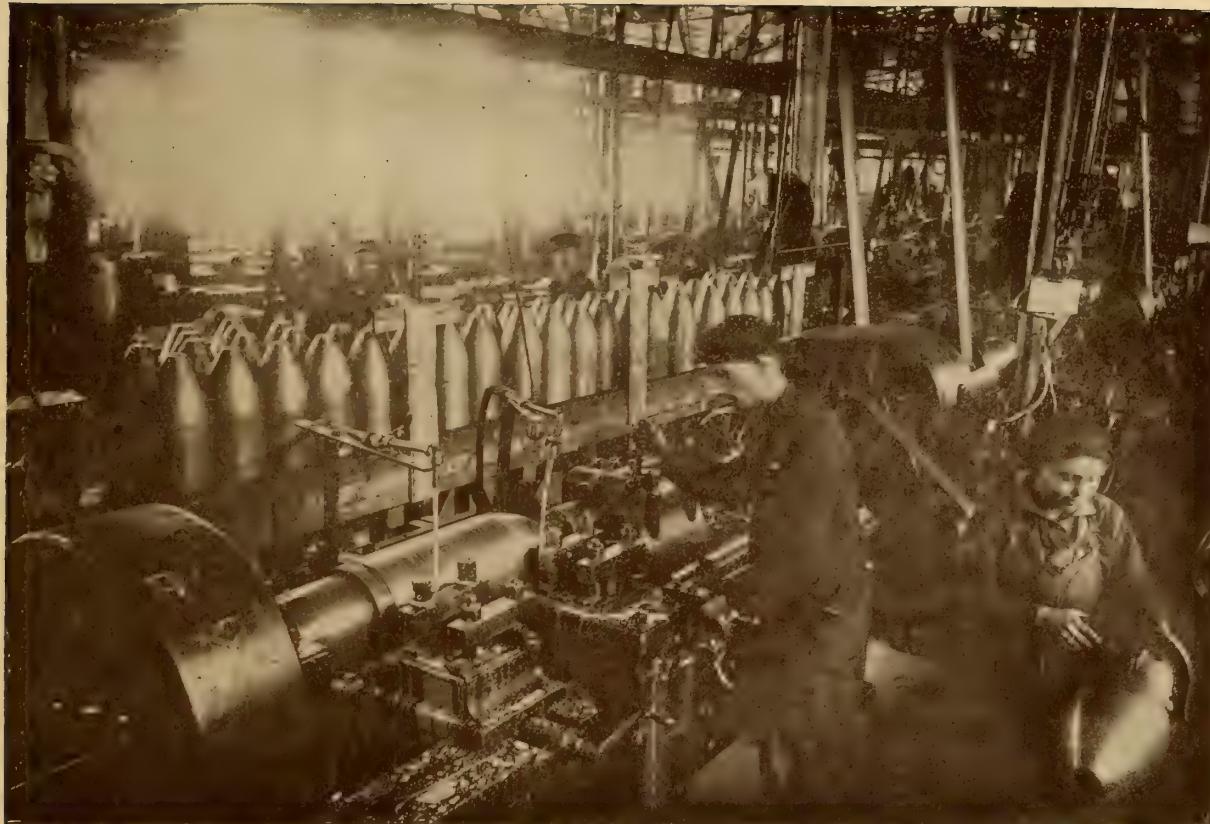
9.2' H.E.  
Shell

Operation  
No. 2  
Drill  
Nose

9.2" H.E.  
(Shell



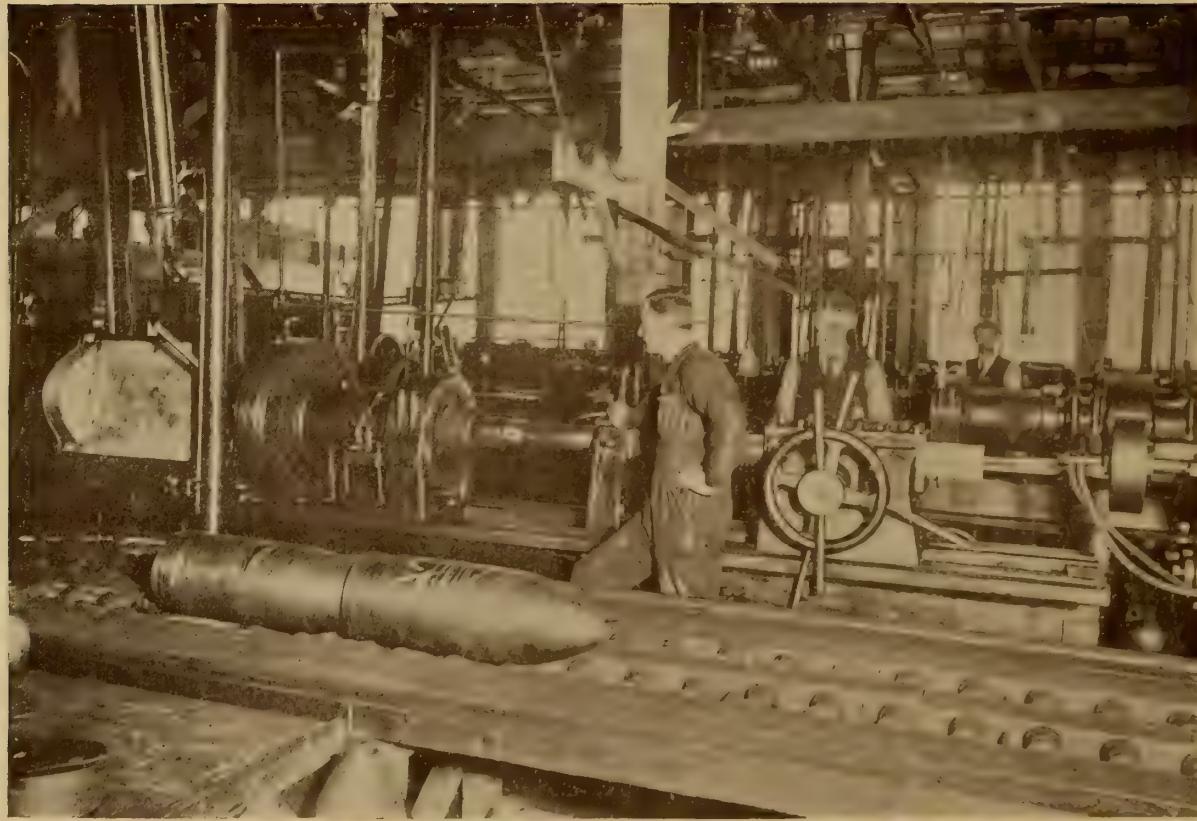
Operation  
No. 3  
Cut off  
Open End



9.2" H.E.  
Shell

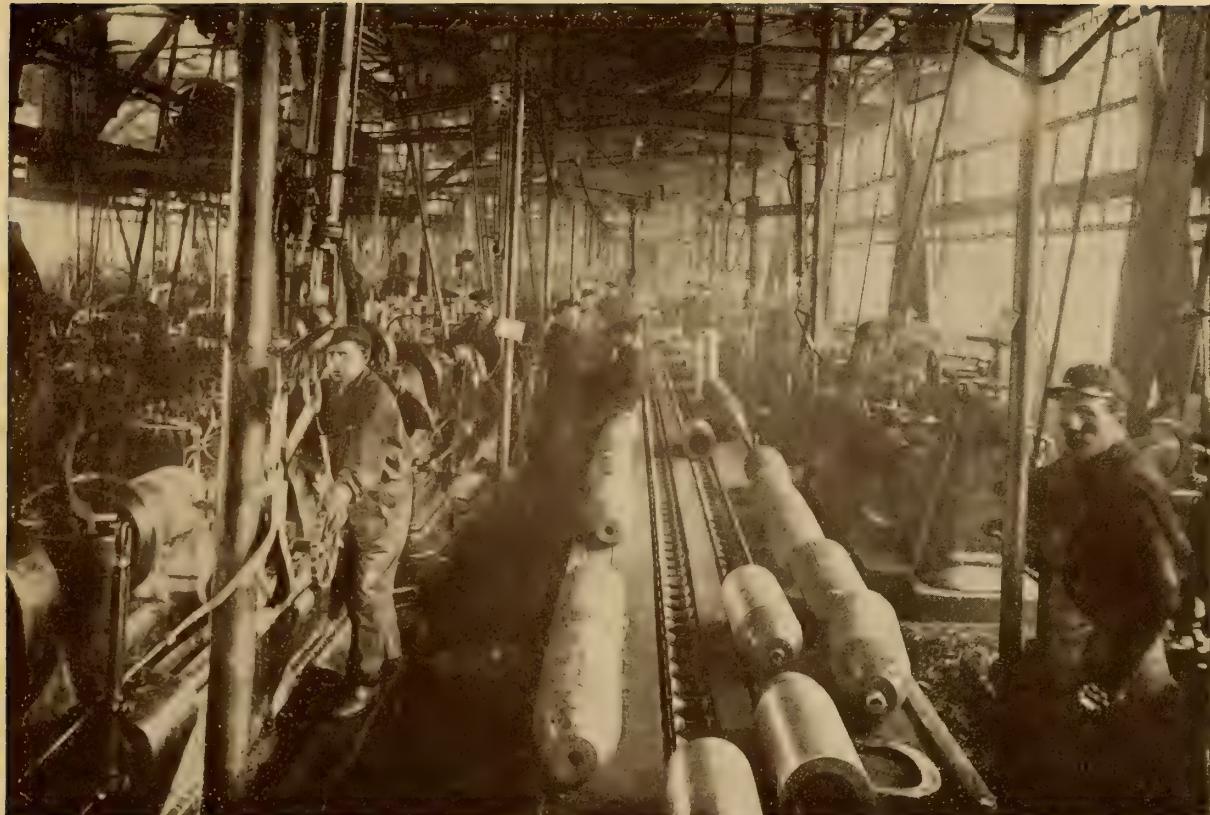
Operation  
No. 4  
Rough  
Turn  
Body

9.2" H.E.  
Shell



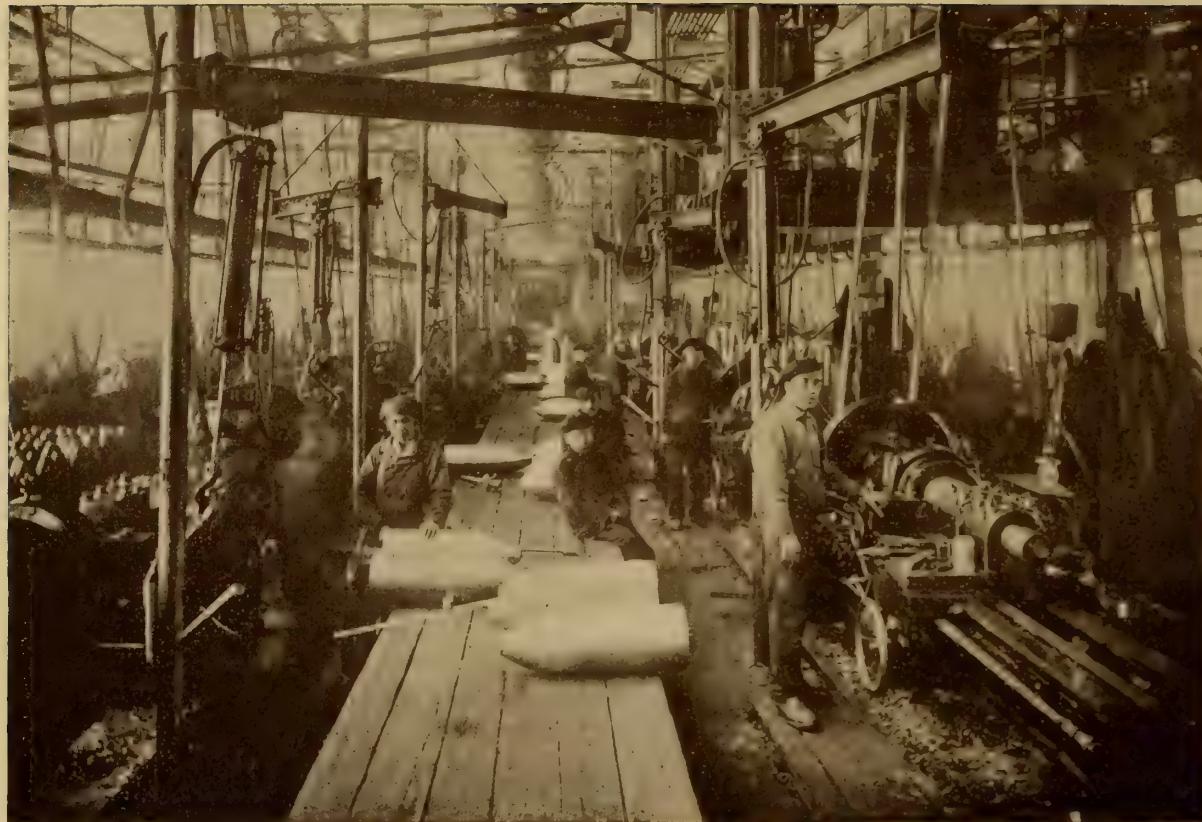
Operation  
No. 5  
Rough  
Form  
Inside  
Profile

9.2" H.E.  
Shell

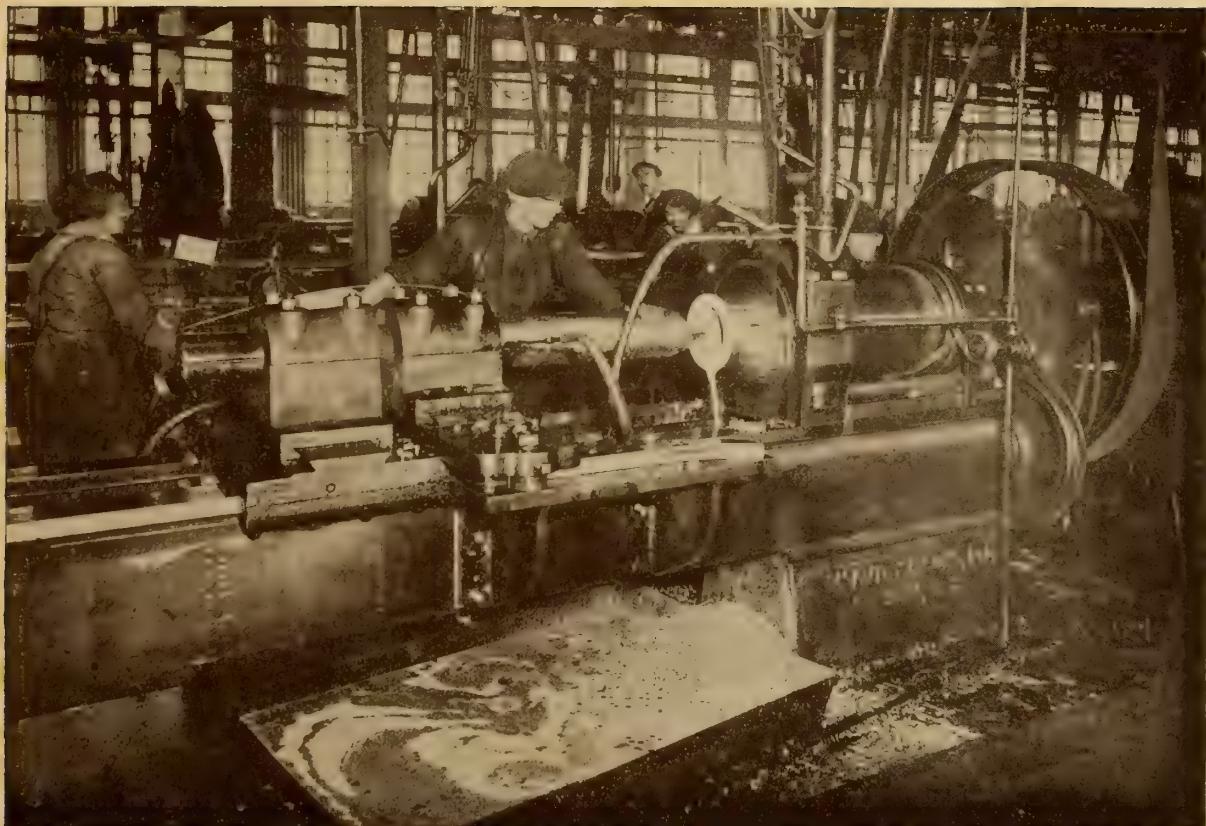


General  
View  
Rough  
Turn  
Section

9.2" H.E.  
Shell



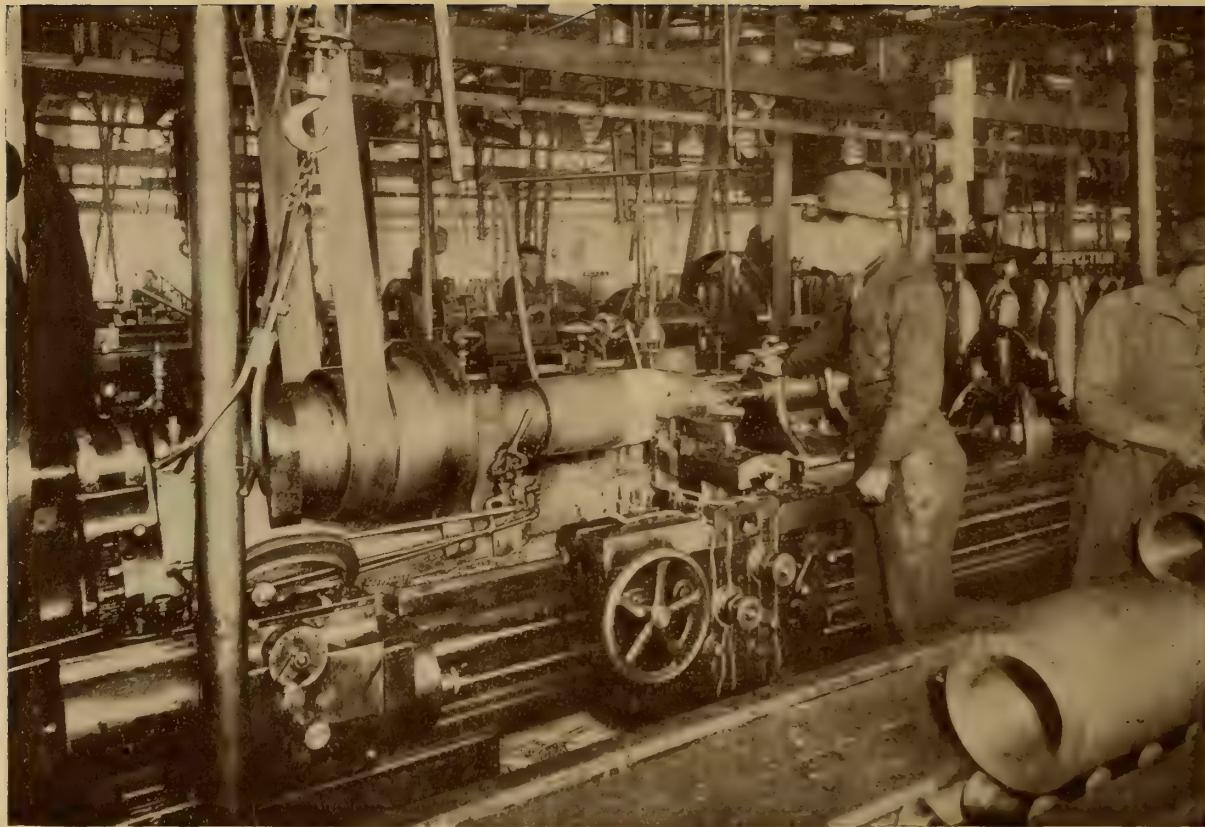
General  
View  
Boring  
Section



9.2" H.E  
Shell

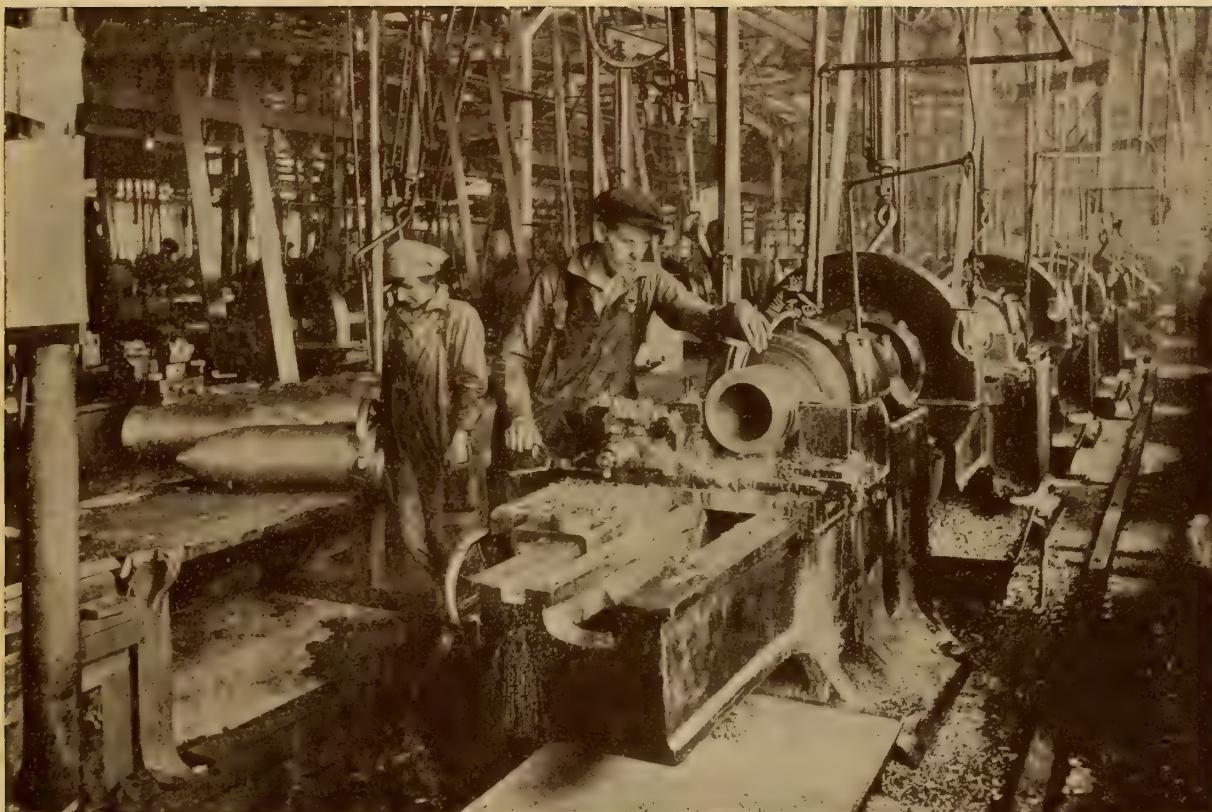
Operation  
No. 7  
Finish  
Bore

9.2" H.E.  
Shell



Operation  
No. 8  
Finish  
Turn Body  
and Nose  
Profile

9.2" H.E.  
Shell



Operation  
No. 9  
Wave Rib  
for Copper  
Band

9.2" H.E.  
Shell



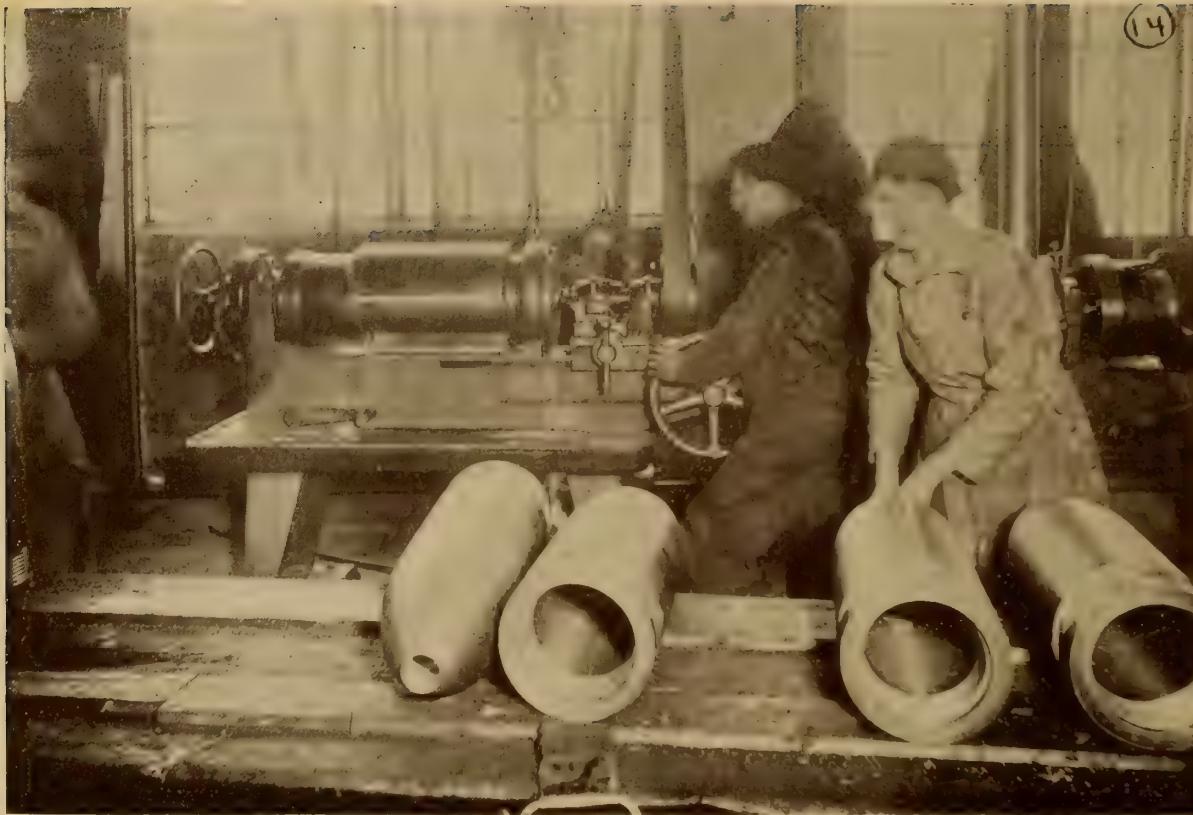
Operation  
No. 10  
Thread  
Mill  
Base



9.2" H.E.  
Shell

Operation  
No. 11  
Bore and  
Ream  
Nose

9.2" H.E.  
Shell



Operation  
No. 12  
Thread  
Mill  
Nose



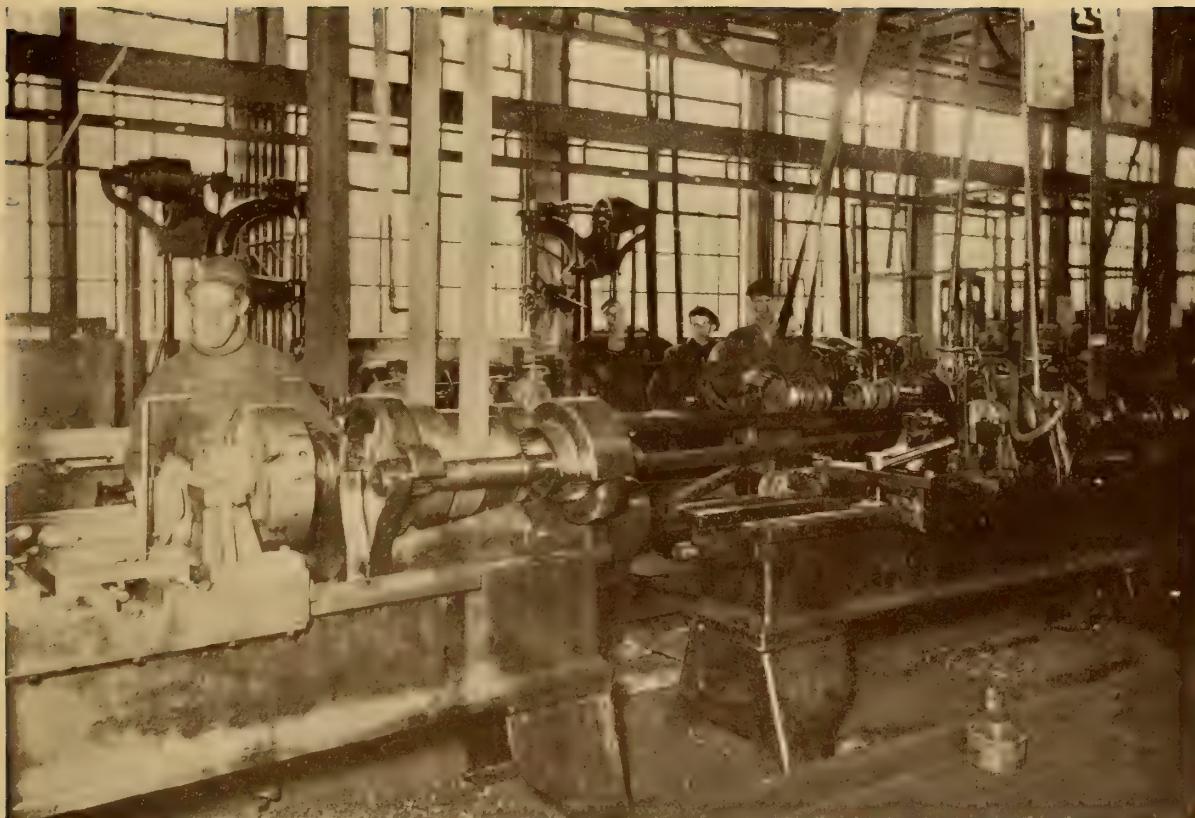
9.2" H.E.  
Shell

General  
View  
Thread  
Milling and  
Finish  
Turning  
Section

9.2" H.E.  
Shell  
Plant



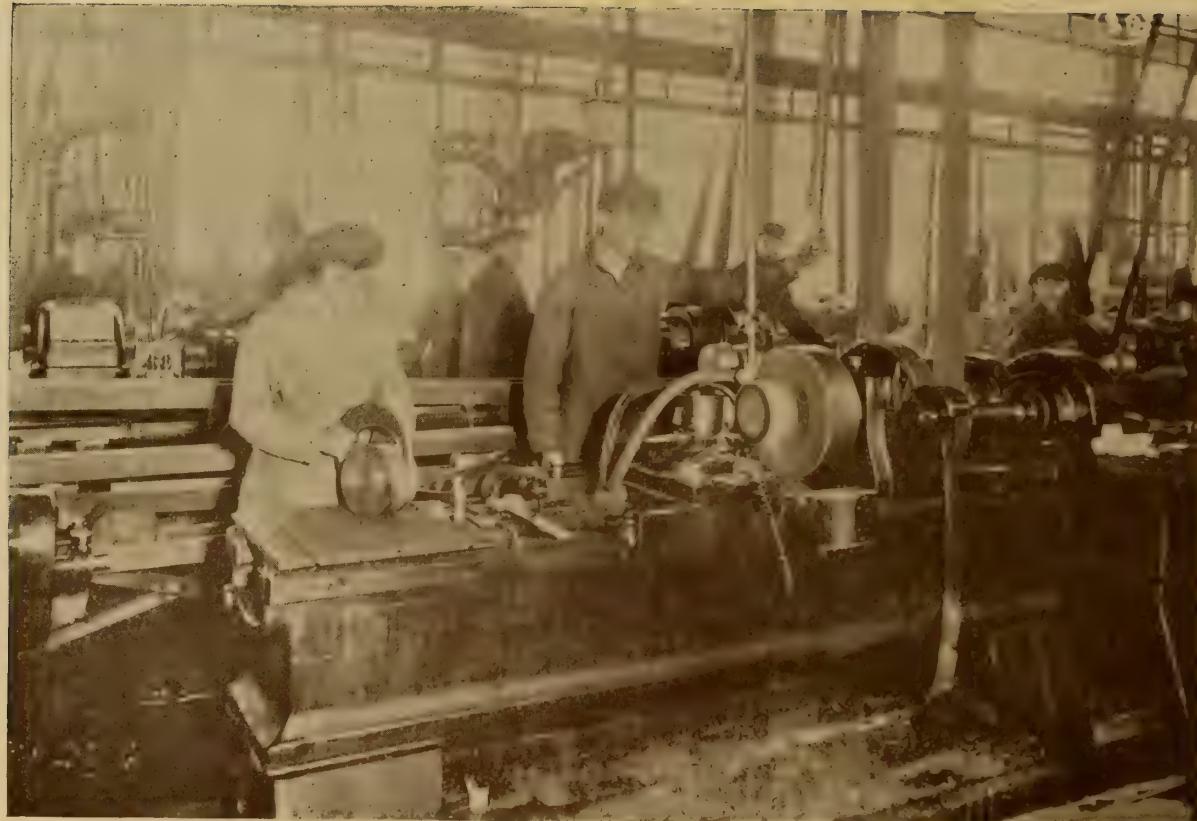
General  
View  
Base Plug  
Section



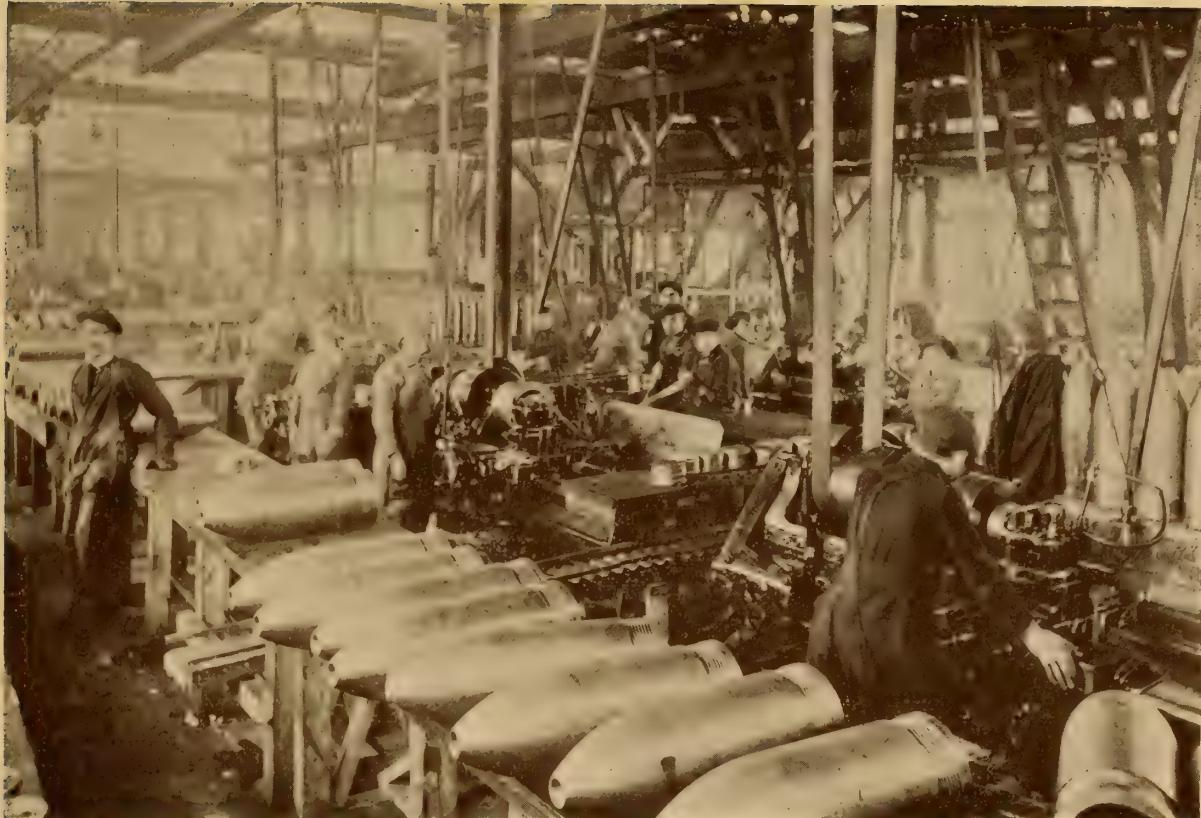
9.2" H.E.  
Shell

Base Plug  
Operation  
No. 1  
Turn  
Flange  
Base Plug

9.2" H.E.  
Shell



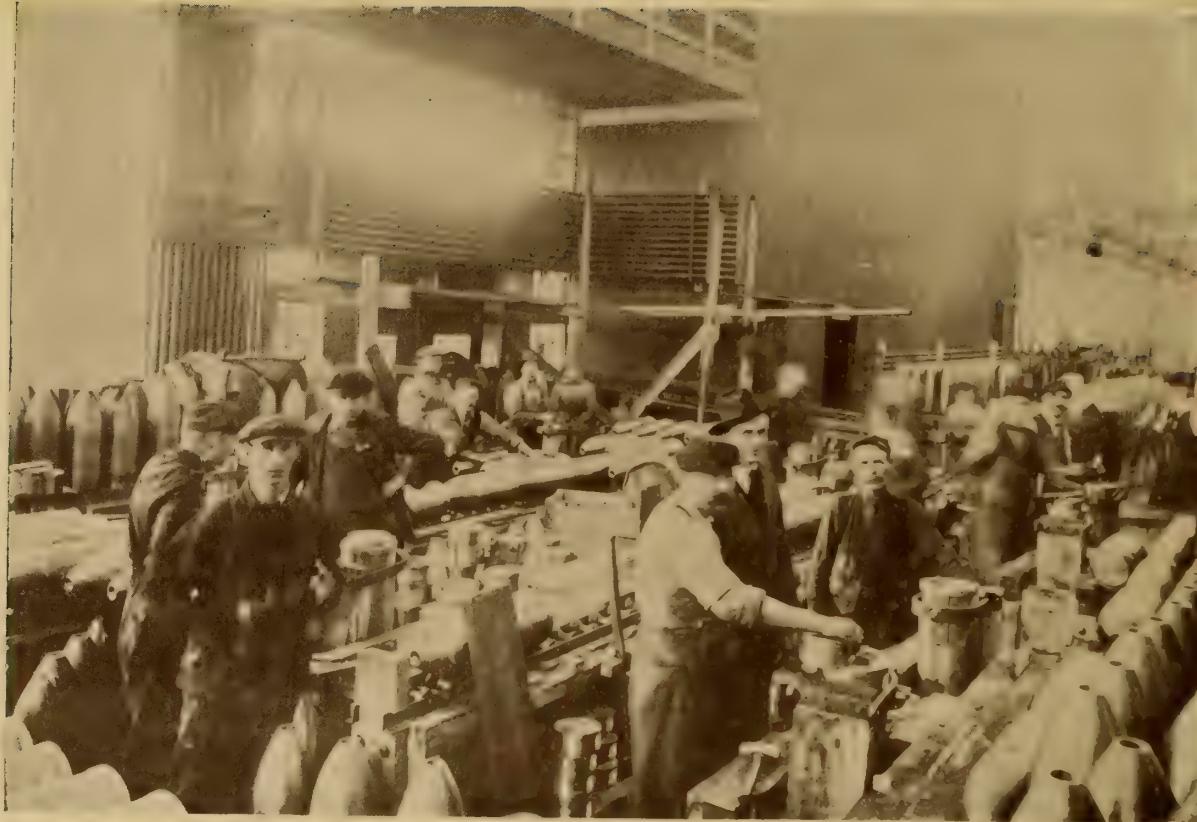
Base Plug  
Operation  
No. 3  
Turn  
Base Plug



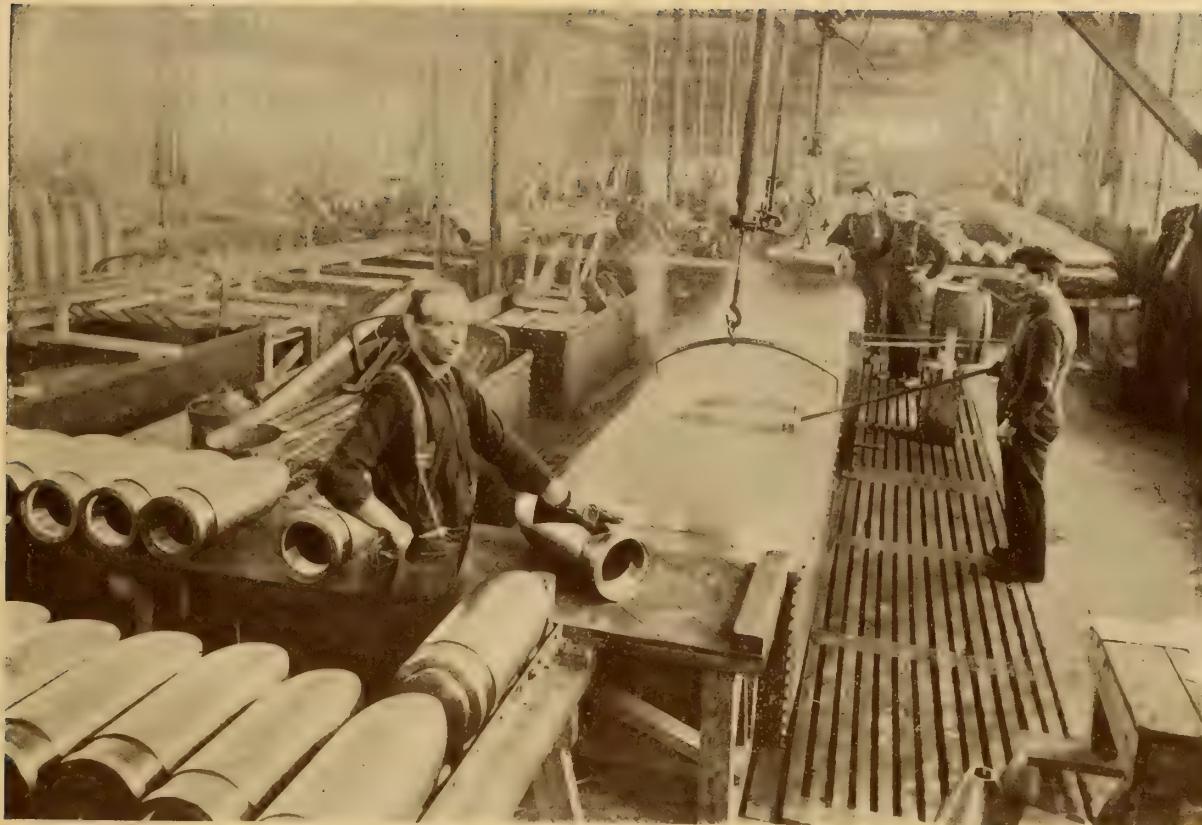
9.2" H.E.  
Shell

Base Plug  
Operation  
No. 8  
Finish Face  
Base Plug

9.2" H.E.  
Shell



Operation  
No. 14  
Fit Base  
Plug



9.2" H.E.  
Shell

Operation  
No. 15  
Clean and  
Wash

9.2' H.E.  
Shell



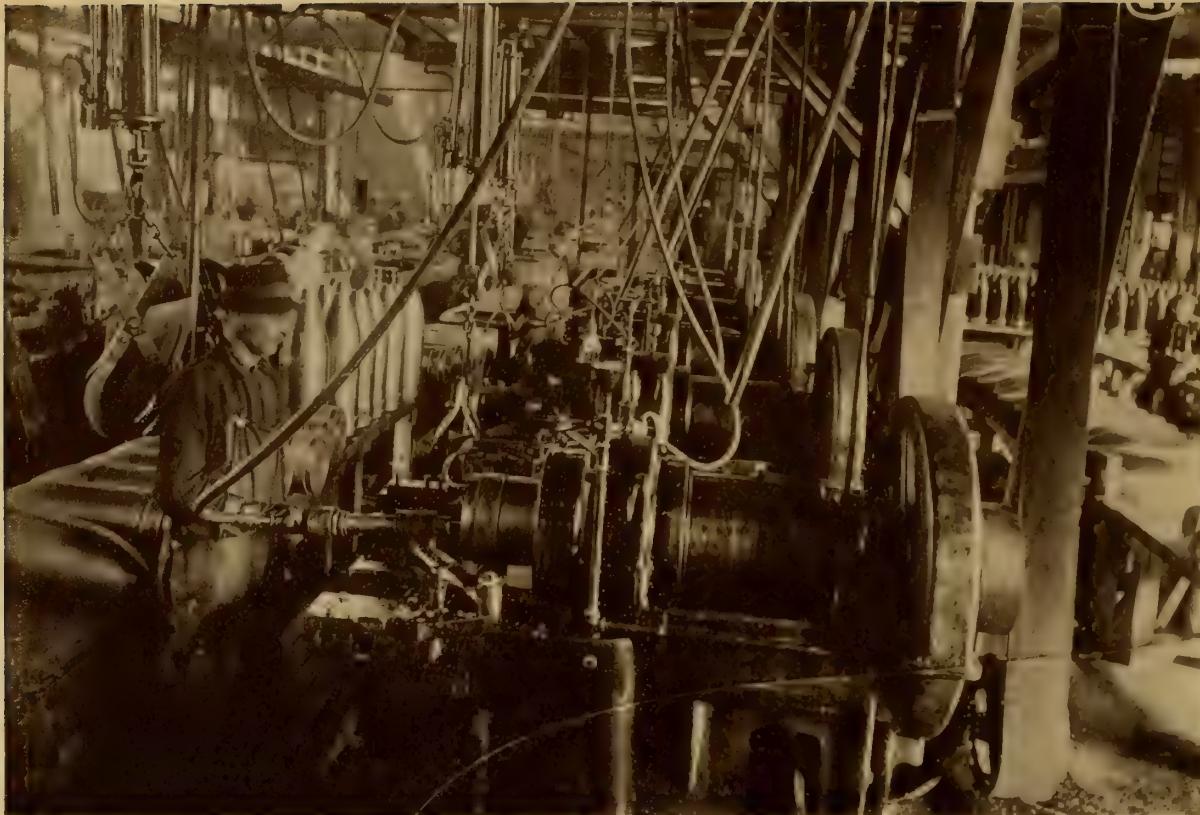
Operation  
No. 16  
Seal  
Base  
Plug



9.2" H.E.  
Shell

Operation  
No. 17  
Press  
Copper  
Band

9.2" H.E.  
Shell



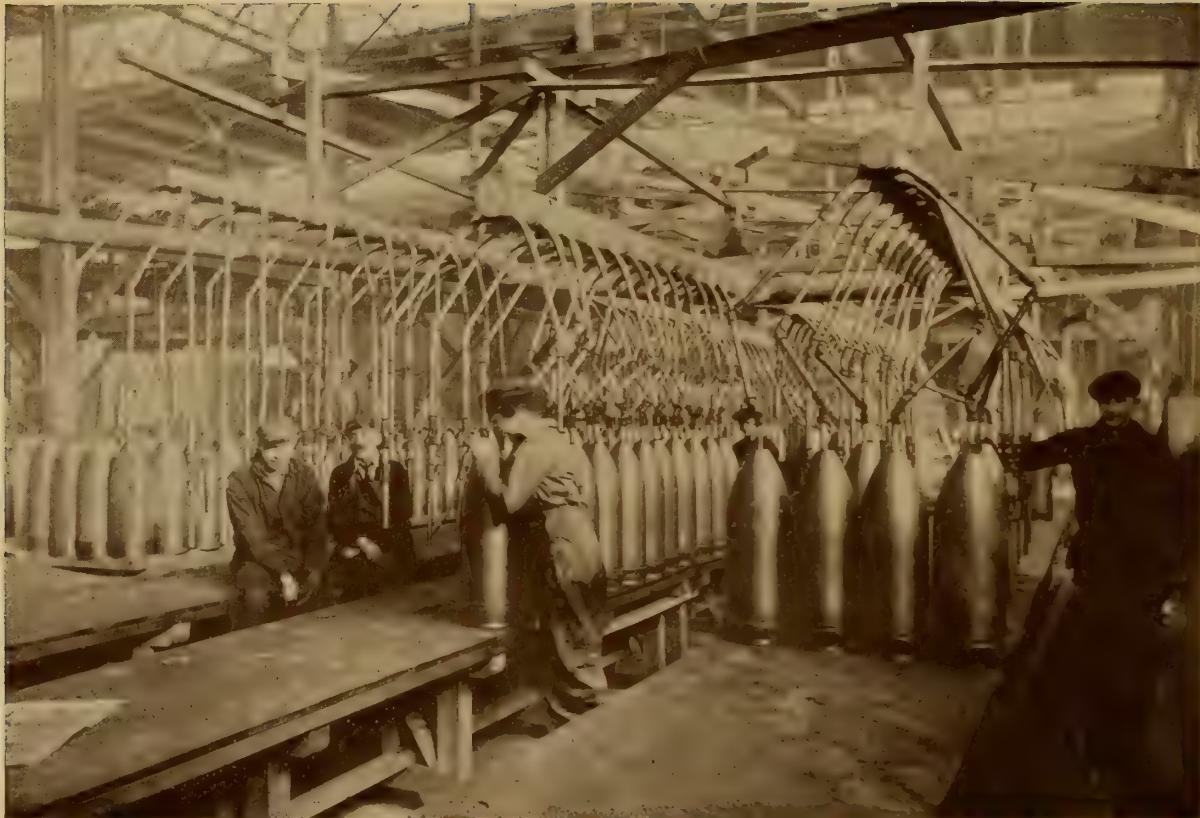
Operation  
No. 18  
Rivet and  
Finish  
Face  
Base



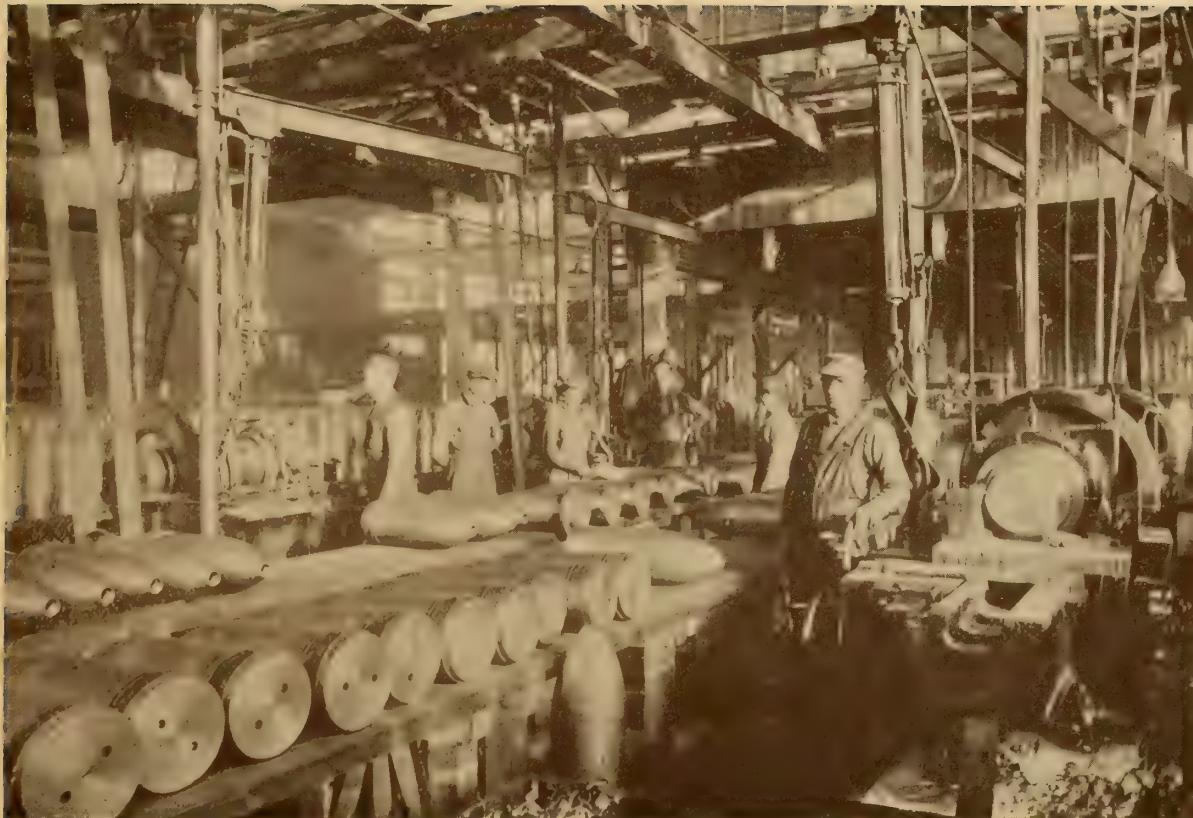
9.2' H.E.  
Shelf

Operation  
No. 19  
Varnish  
Interior

9.2" H.E.  
Shell



Operation  
No. 20  
Drying  
Varnish



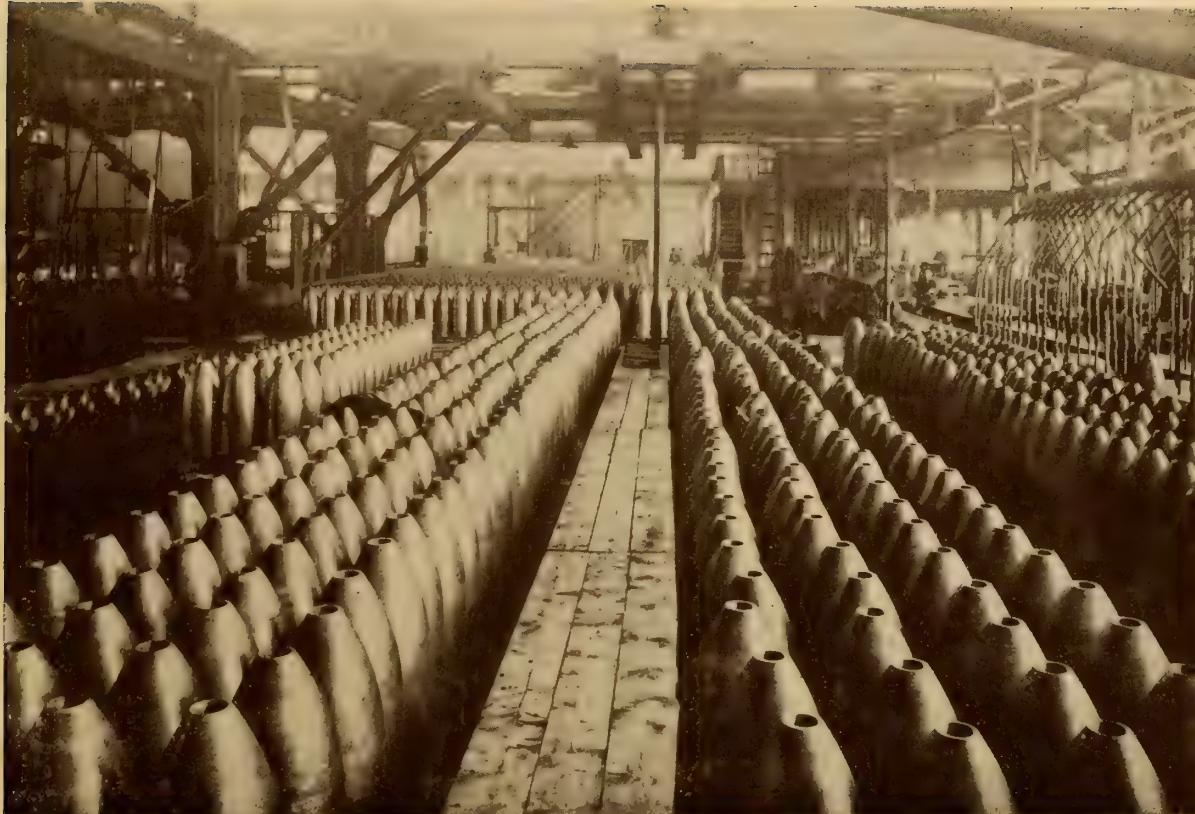
9.2" H.E.  
Shell

Operation  
No. 21  
Finish  
Turn  
Copper  
Band

9.2" H.E.  
Shell



Band  
Turning  
Section



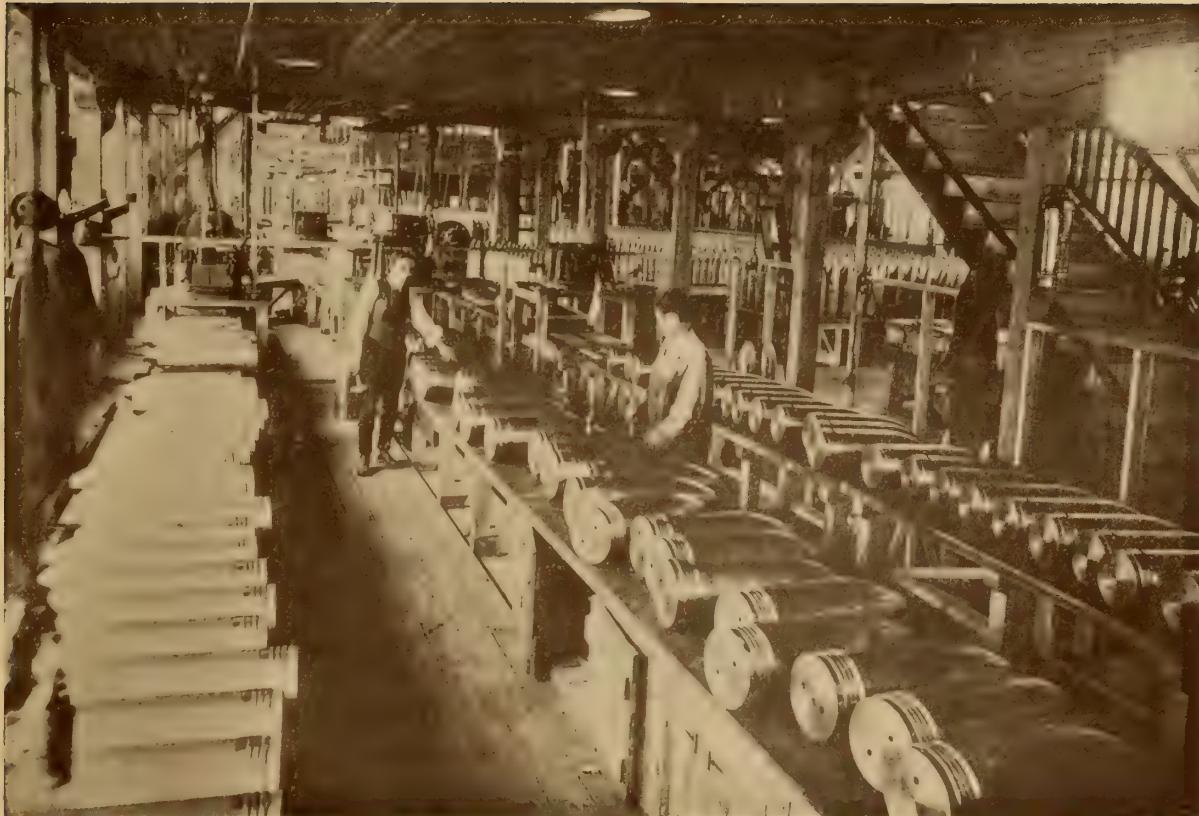
9.2" H.E.  
Shell

General  
View  
Varnish and  
Copper  
Band  
Turning

9.2" H.E.  
Shell



U. S.  
Government  
Preliminary  
Inspection



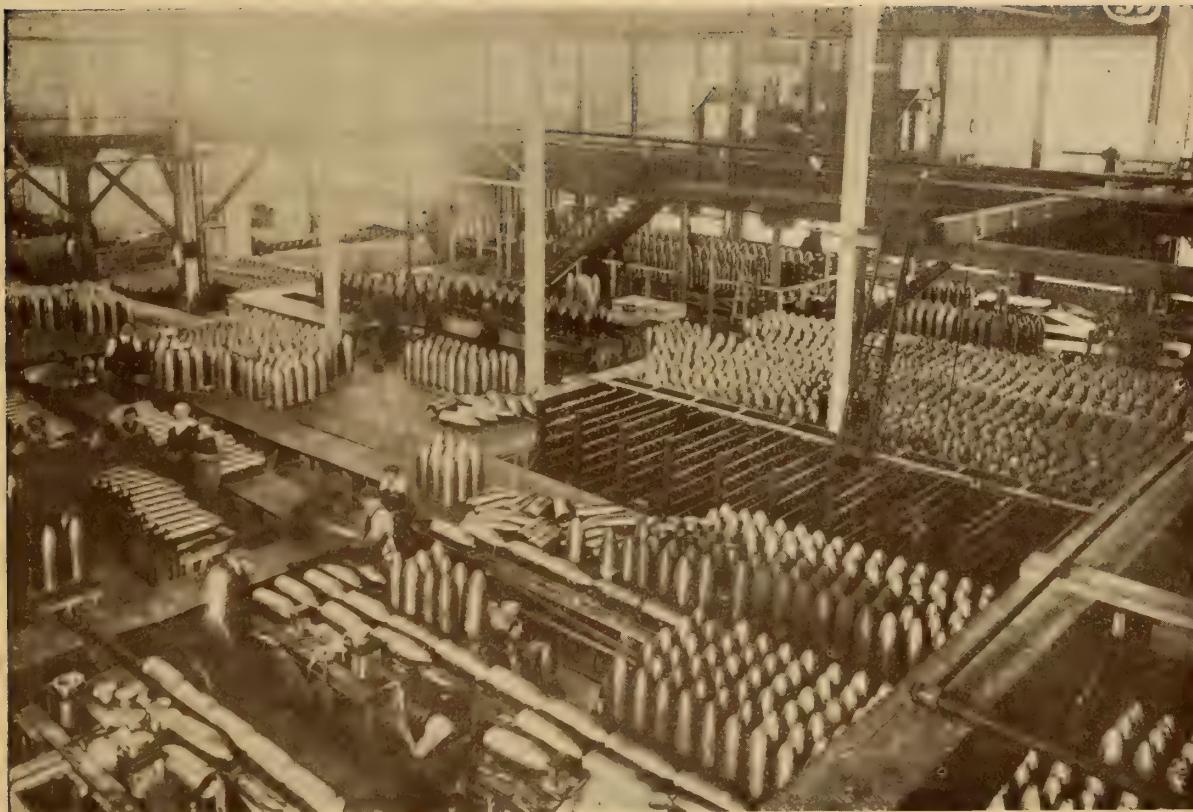
9.2" H.E.  
Shell

U. S.  
Government  
Final  
Inspection

9.2" H.E.  
Shell



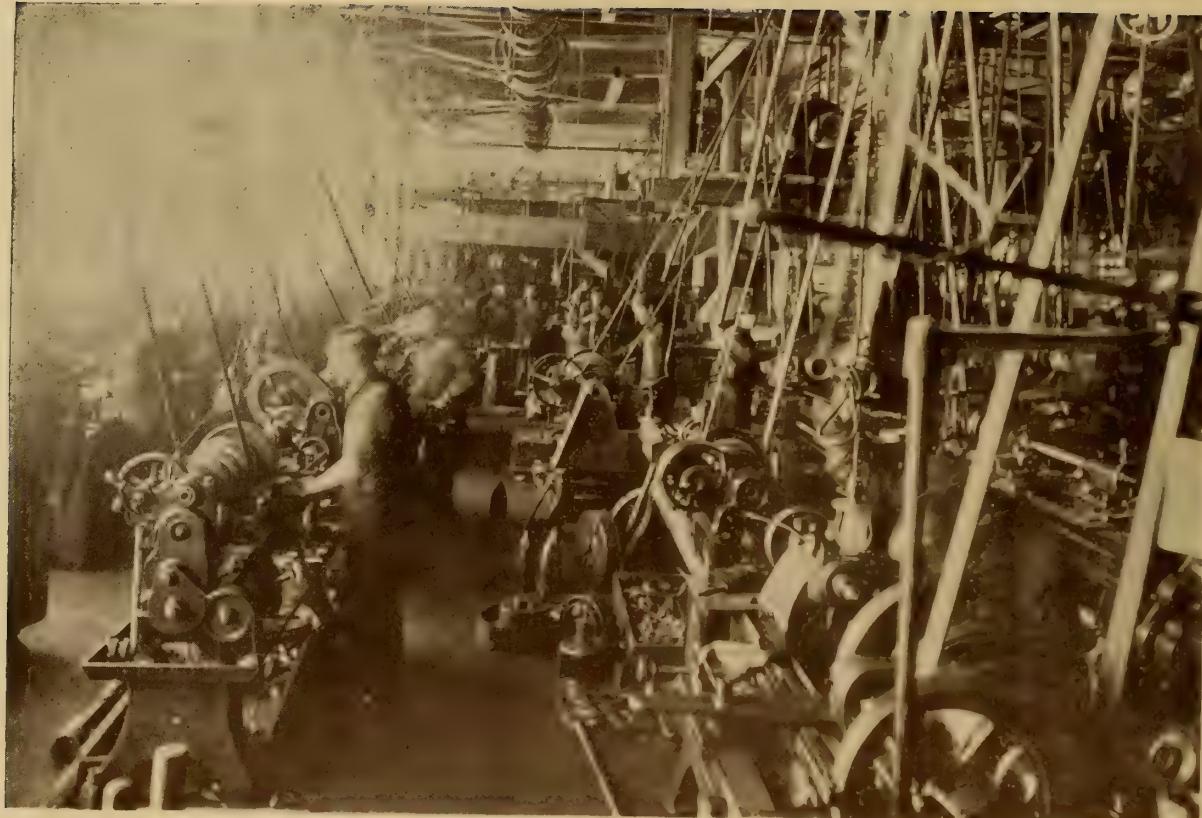
Varnishing  
Outside of  
Shell for  
Shipment



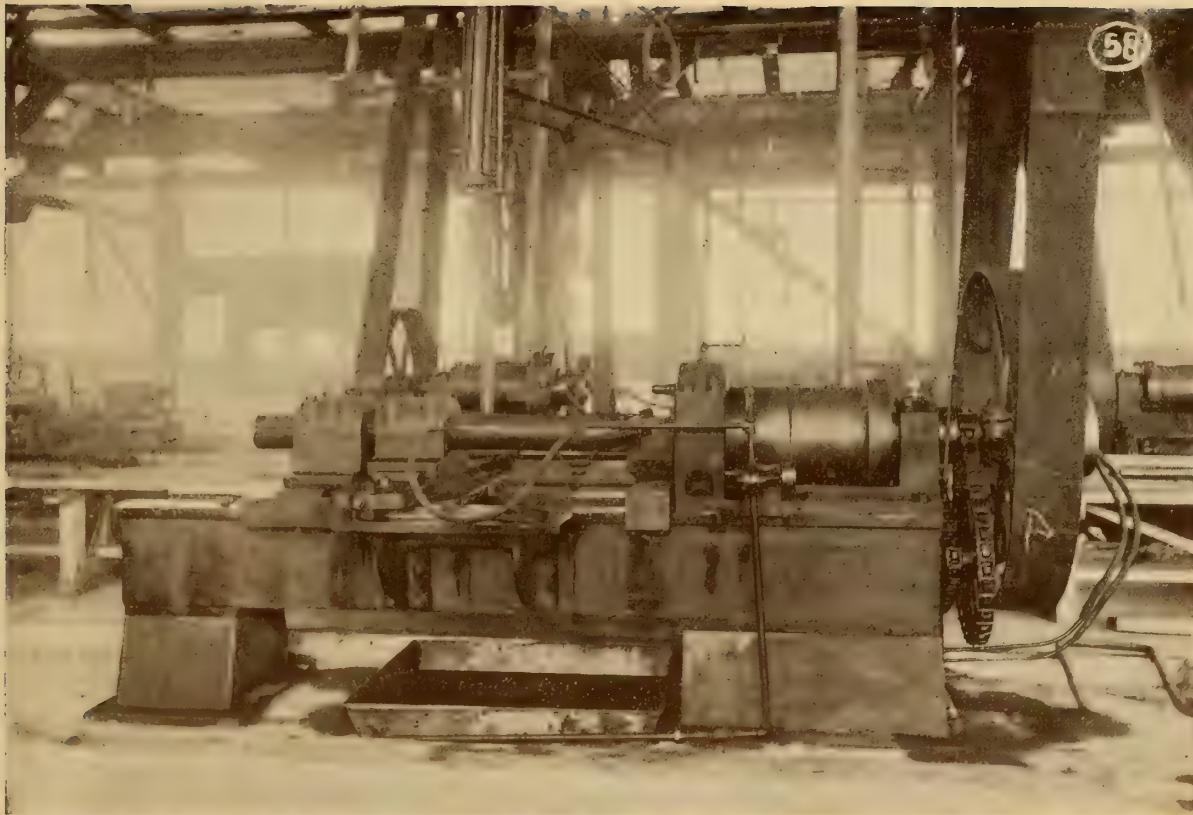
9.2" H.E.  
Shell

General  
View  
No. 2  
Shop  
from  
Gallery

9.2" H.E.  
Shell



Tool Dept.



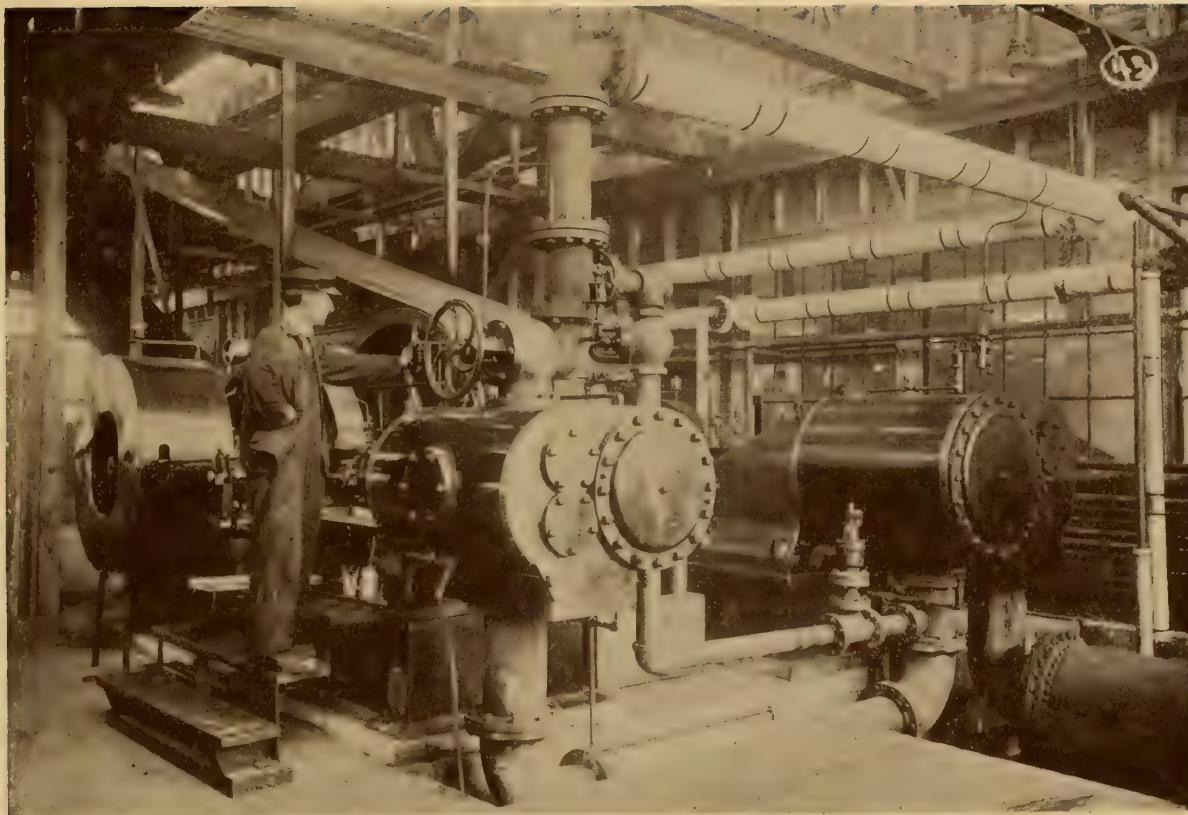
9.2" H.E.  
Shell

McAvity  
Boring Lathe  
Their own  
design for  
Rough and  
Finish Bore  
Interior

.9.2" H.E.  
Shell

Boiler  
Room,  
No. 1  
Power  
House





9.2" H.E.  
Shell

Engine  
No. 2  
Power  
House

Women's  
Rest  
Room

9.2" H.E.  
Shell



9.2" H.E.  
Shell



Cafeteria

9.2" H.E.  
Shell



General  
Office



9.2" H.E.  
Shell

**Emergency  
Hospital  
for First  
Aid**

9.2" H.E.  
Shell



Garage



9.2" H.E.  
Shell

Drafting  
Department

9.2" H.E.  
Shell



Chief  
Inspector's  
Office



9.2" H.E.  
Shell

Machined  
Shells  
Awaiting  
Shipment

4.7" Shell



Sydney  
Street

## 4.7 Plant Officers and Staff

WILLIAM M. FRASER.....	<i>Superintendent</i>
F. L. MILLER.....	<i>Purchasing Agent</i>
WALTER MOWBRAY.....	<i>Chief Draughtsman</i>
JOHN L. SMITH.....	<i>Chief Clerk</i>
E. S. COSSOBOMM.....	<i>Chief Time Keeper</i>

### No. 1 Shift

7 A.M. to 6 P.M.

M. C. HANSON, *Asst. Supt.*

M. HAPPENY.....	<i>Foreman of Operations</i>
J. P. MORAN.....	<i>Foreman of Operations</i>
T. C. WILCOX.....	<i>Foreman of Operations</i>
W. H. DOHERTY.....	<i>Foreman of Operations</i>
J. J. FRASER.....	<i>Foreman of Heat Treatment</i> .....

### No. 1 Shift

*Head Inspector, ROY FERRIS*

F. H. CRAWFORD, *Chief Inspector*

FREEMAN WENTZELL, <i>Asst. Supt. Tools and Equipment</i>	
Foreman Millwright.....	THOS. A. FRASER
Foreman Electrician.....	E. DAREY
Chief Engineer Power.....	J. S. ELLIOTT

Mrs. ALICE COYLE, *Supervisor of Women Employees*

Mrs. JOHN EDGE, *Asst. Supervisor*

### No. 2 Shift

6 P.M. to 6.30 A.M.

B. F. LEWIS, *Asst. Supt.*

H. EVANS.....
W. ROSS.....
O. J. DICK.....
DAN MORRISON.....
H. FLEWELLING.....

### No. 2 Shift

*Head Inspector, J. KELLEHER*

MISS STELLA McCRAE, *Asst. Supervisor*

4.7" H.E.  
Shell



Operation  
Nos. 1 and 2  
Cut off  
and Centre  
for Rough  
Turn



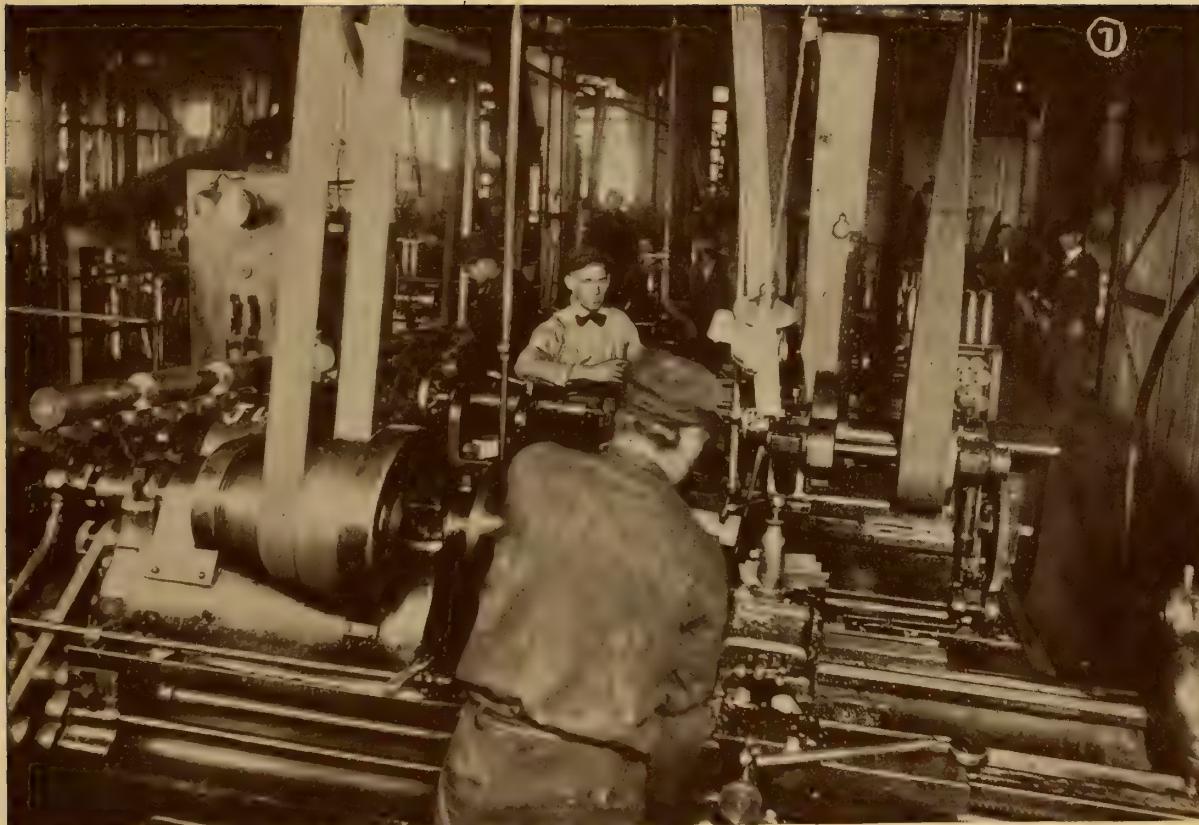
4.7" H.E.  
Shell

Operation  
No.  
Rough  
Turn Body

4.7" H.E.  
Shell



Operation  
No. 6  
Rough  
Bore  
Interior



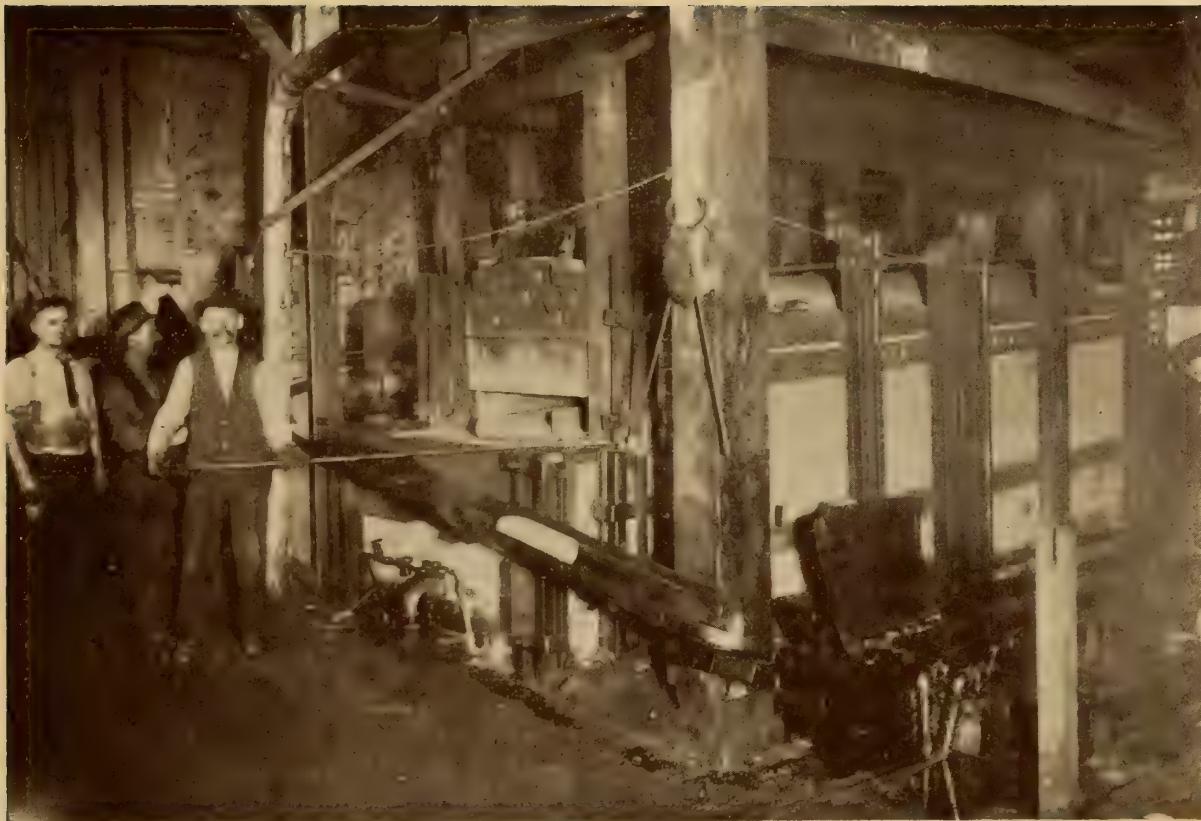
4.7" H.E.  
Shell

Operations  
Nos. 9 and 10  
Second  
Rough  
Turn and  
True up  
Base

4.7" H.E.  
Shell



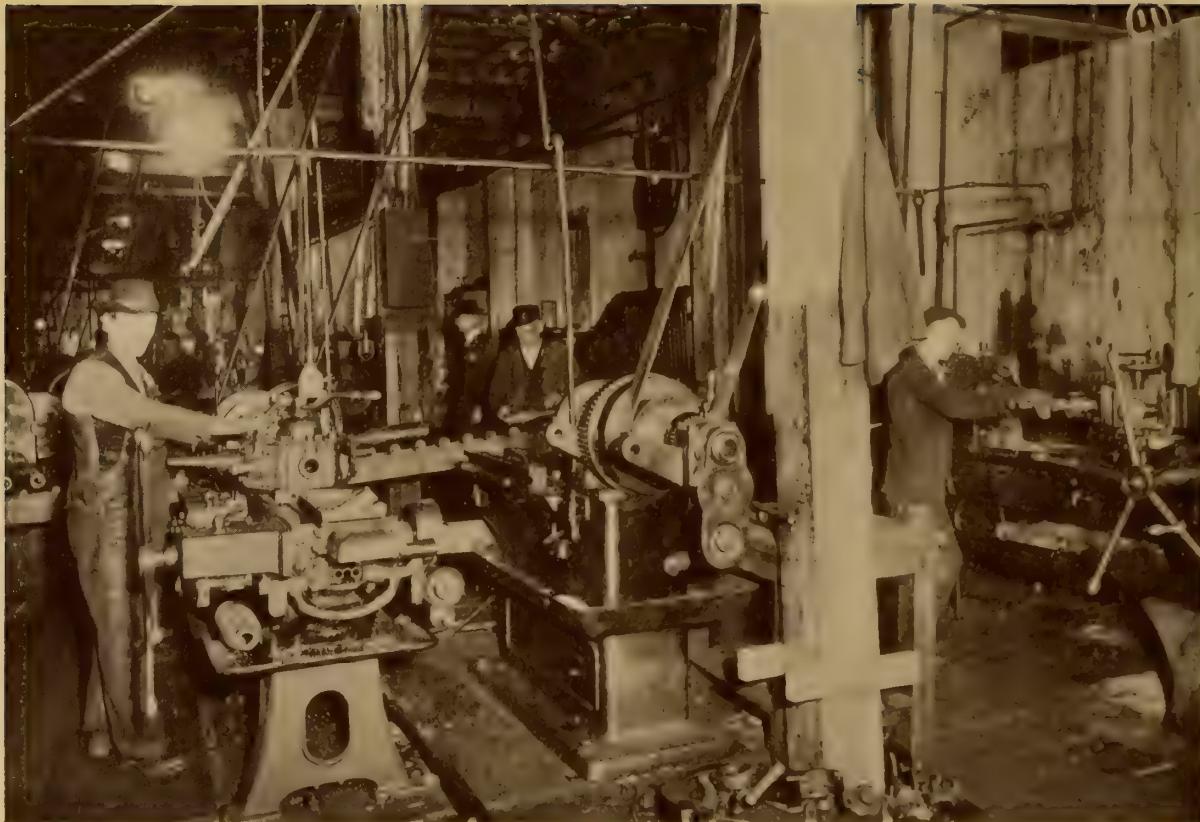
Operation  
No. 11  
Heat and  
Press Nose



4.7" H.E.  
Shell

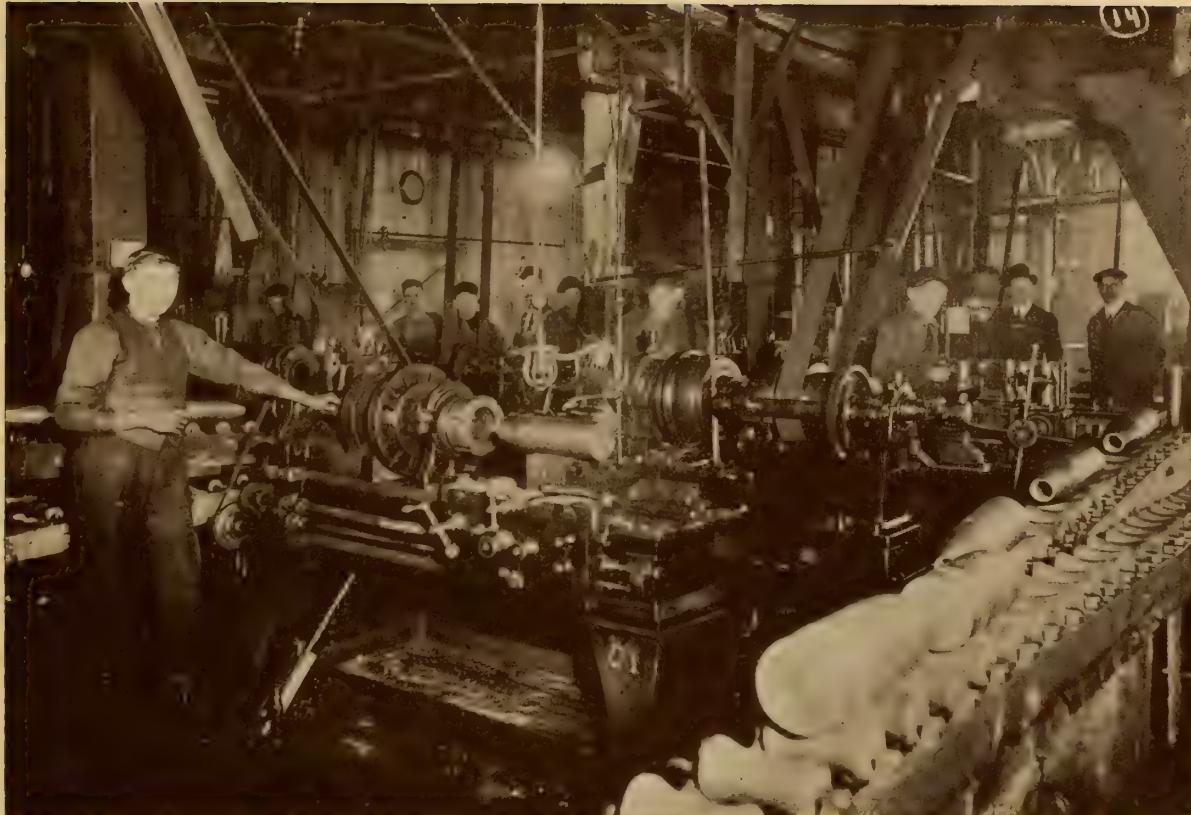
Operation  
No. 12  
Heat  
Treatment

4.7" H.E.  
Shell



Operation  
No. 13  
Bore and  
Ream  
Nose

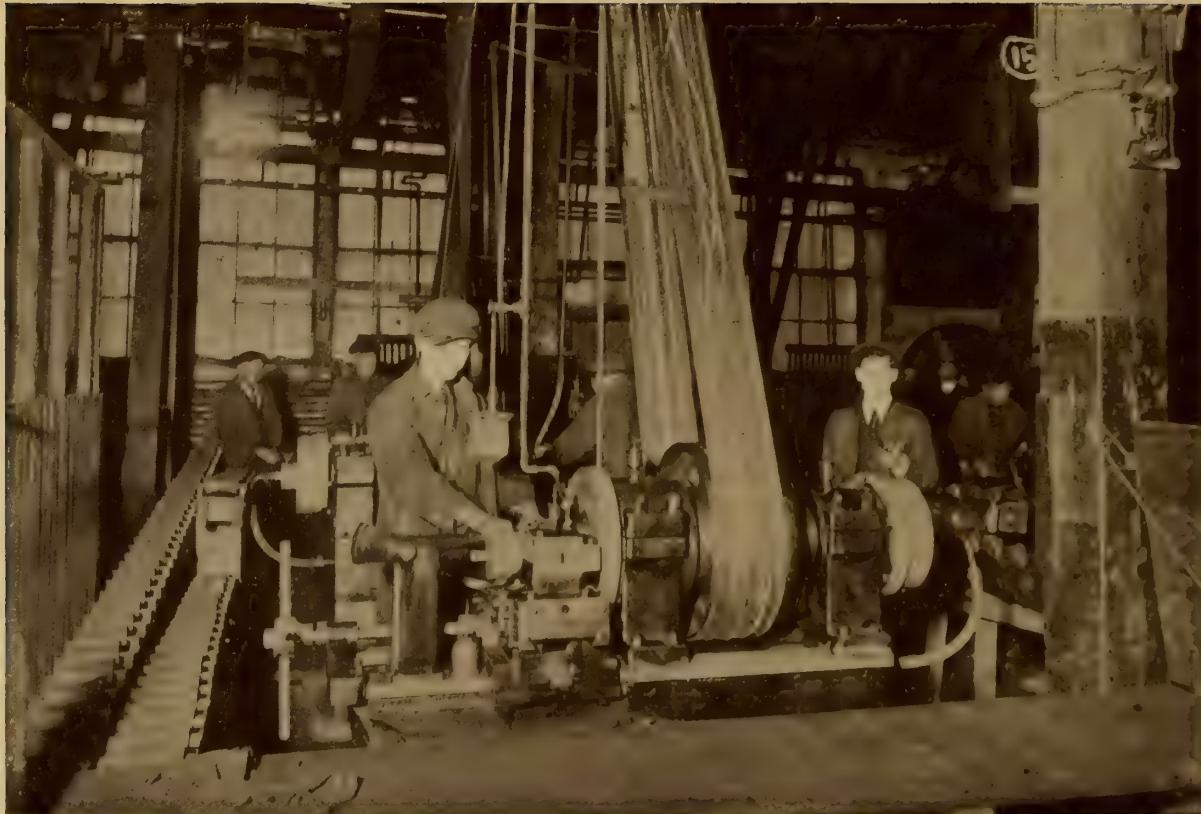
4.7" H.E.  
Shell

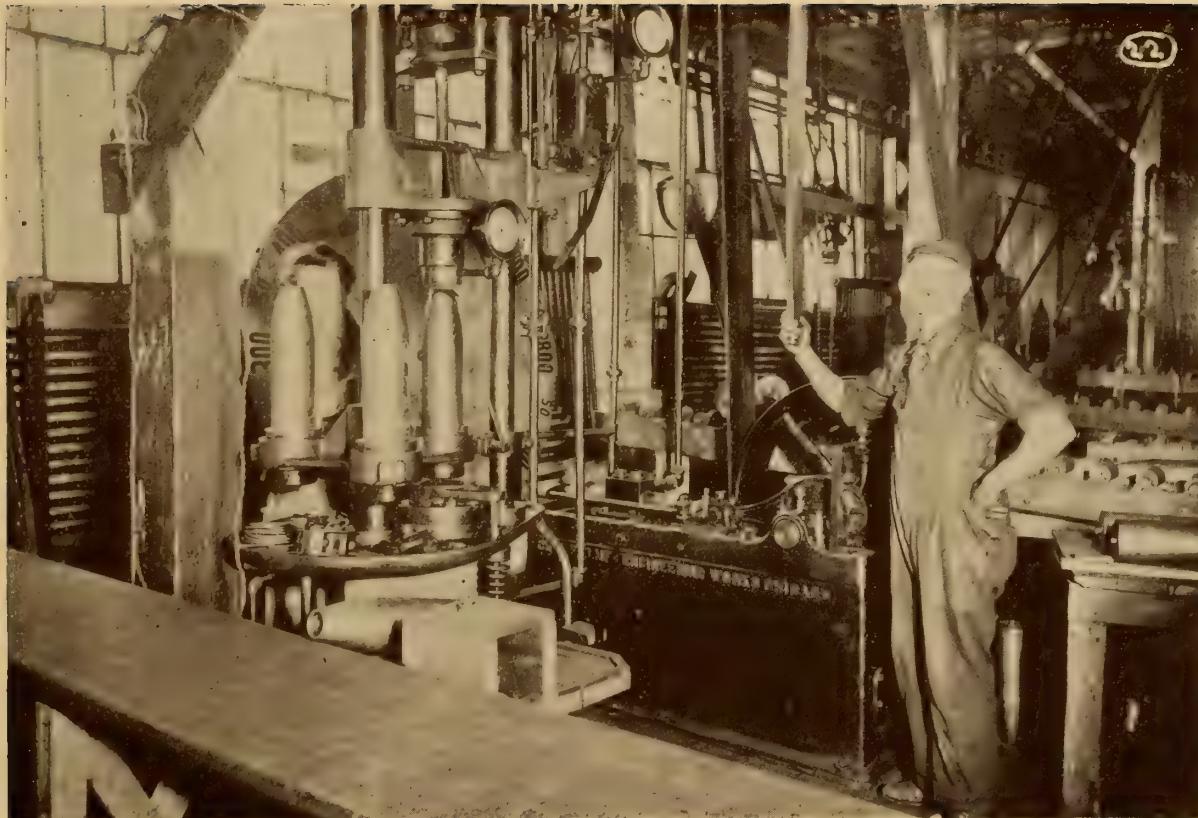


Operation  
No. 16  
Face Base  
to Weigh

4.7" H.E.  
Shell

Operations  
Nos. 19  
and 23  
Wave Groove  
for Copper  
Band and  
Grind  
Bourlette





4.7" H.E.  
Shell

Operation  
No. 21  
Hydraulic  
Testing

4.7" H.E.  
Shell



Operation  
No. 22  
Sand  
Blast and  
Washing  
Interior



4.7" H.E.  
Shell

Operation  
Nos. 23  
and 24  
Press Bands  
and Base  
Plates

4.7" H.E.  
Shell



Operation  
No. 27  
Painting



4.7" H.E.  
Shell

Preliminary  
Inspection

4.7" H.E.  
Shells



Shop  
Final  
Inspection



4.7" H.E.  
Shell

Government  
Final  
Inspection

4.7" H.E.  
Shell



Ladies'  
Rest  
Room



Ladies'  
Rest  
Room

4.7" H.E.  
Shell









